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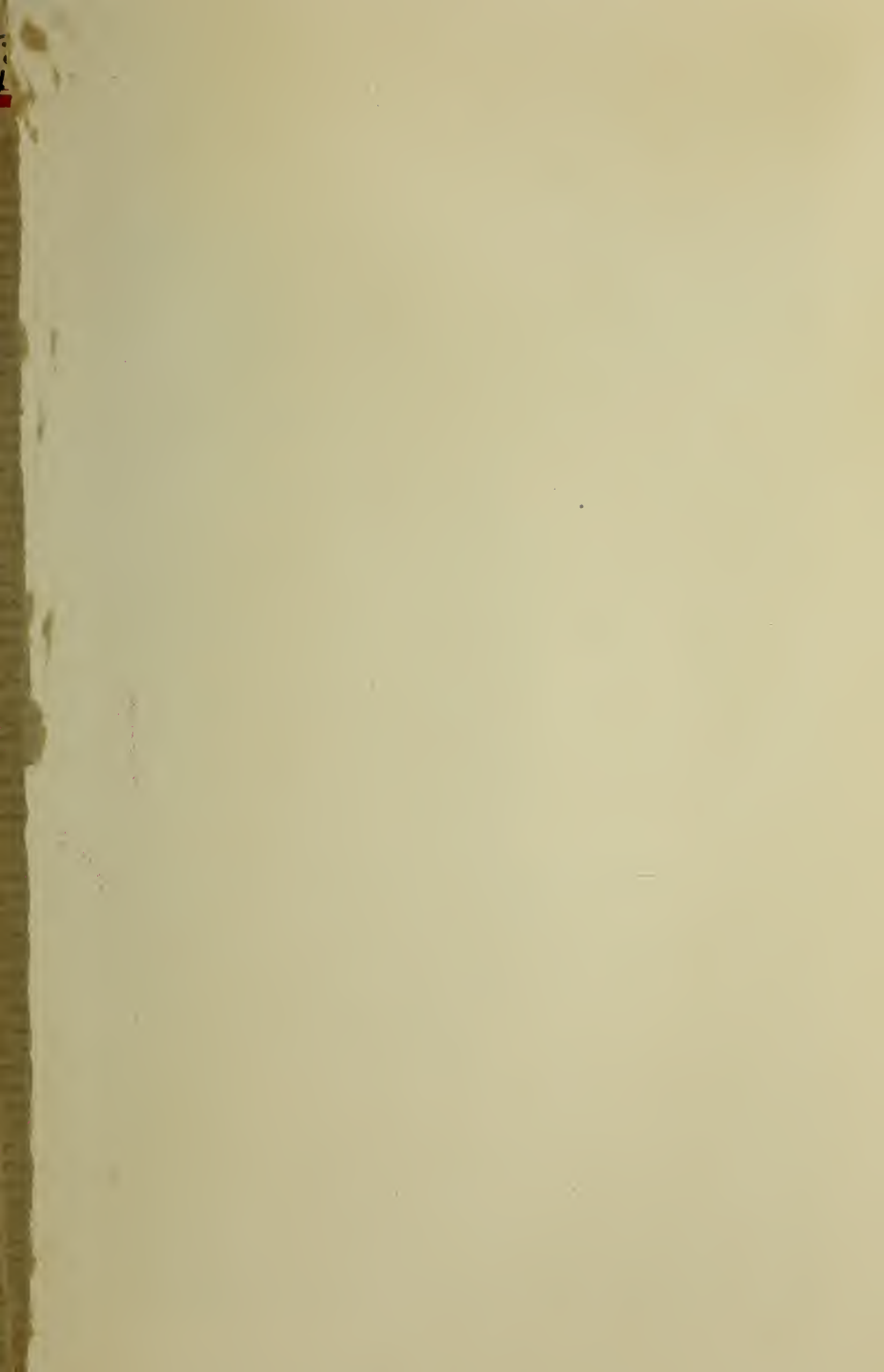
New Mexico  
College of Agriculture  
AND  
Mechanic Arts.

Mesilla Park.

\_\_\_\_\_  
1895-96.

TO THE  
HONORABLE SENATE  
OF THE UNITED STATES







MAIN COLLEGE BUILDING.



NEW MEXICO

COLLEGE OF AGRICULTURE

—AND—

MECHANIC ARTS.

MESILLA PARK.

CATALOGUE FOR 1895-96.

And Announcements for 1896-97.

PRINTED BY THE  
L. R. ALLEN PUBLISHING HOUSE,  
LAS VEGAS, N. M.

## Calendar for 1896=7.

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Re-examinations and examinations of new students for admission, Tuesday, September 1, 1896

First term begins Wednesday, September 2, 1896.

First term ends Wednesday, November 25, 1896.

Second term begins Monday, November 30, 1896.

Holiday vacation begins Saturday, December 19, 1896, and ends Sunday, January 3, 1897.

Second term ends Wednesday, March 10, 1897.

Third term begins Monday, March 15, 1897.

Third term ends Wednesday, June 9, 1897.

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1895/96-

1902/03

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## Board of Regents.

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WILLIAM T. THORNTON, Governor, *Ex-Officio*.

AMADO CHAVES, Superintendent Public Instruction, *Ex-Officio*.

J. D. W. VEEDER, Las Vegas; term expires 1896.

ROBERT BLACK, Silver City; term expires 1897.

THOMAS J. BULL, Mesilla; term expires 1898.

DEMETRIO CHAVEZ, Mesilla; term expires 1899.

G. A. RICHARDSON, Roswell; term expires 1900.

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### Officers of the Board.

THOMAS J. BULL, President.

DEMETRIO CHAVEZ, Secretary and Treasurer.

## Faculty.

---

[Arranged in the order of appointment, except the President.]

CORNELIUS T. JORDAN, A. M.,  
*President and Professor of Psychology and Logic.*

JOHN P. OWEN,  
*Vice President and Professor of History and Political Science.*

CLARENCE T. HAGERTY, M. S.,  
*Professor of Mathematics.*

ARTHUR GOSS, M. S., A. C.,  
*Professor of Chemistry.*

GEORGE VESTAL,  
*Professor of Agriculture and Horticulture.*

FRANK W. BRADY, M. E.,  
*Professor of Mechanical and Irrigation Engineering and Physics.*

WALTER W. ROBERTSON, A. M.,  
*Professor of English and Latin, and Principal of the Sub-Freshman Department.*

JOHN D. TINSLEY,  
*Professor of Biology.*

GEORGE W. MILES, M. S.,  
*Professor of Astronomy and Geology, and Instructor in Book-keeping.*

## Instructors and Assistants.

---

IDA M. JONES,

*Instructor in Spanish and Assistant in the Sub-Freshman Department.*

FRANK E. LESTER,

*Instructor in Stenography and Typewriting, and College Clerk.*

R. FRED HARE, M. S.,

*Instructor in Chemistry.*

FABIAN GARCIA, B. S.,

*Meteorologist and Assistant in Agriculture and Horticulture*

CHARLES MILLS,

*Instructor in College Shops.*

J. P. STEWART,

*Instructor in Telegraphy.*

ELLEN F. GIBSON,

*Instructor in Elocution and Physical Culture, and Assistant in the Sub-Freshman Department.*

## Faculty Committees.

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### JUDICIARY.

Arthur Goss, *Chairman*,  
Walter W. Robertson, Frank W. Brady.

### COURSE OF STUDY.

John P. Owen, *Chairman*,  
Clarence T. Hagerty, Walter W. Robertson.

### LIBRARY.

John D. Tinsley, *Chairman*,  
John P. Owen, Arthur Goss.

### BUILDINGS AND GROUNDS.

George Vestal, *Chairman*,  
John D. Tinsley, Frank W. Brady.

### CATALOGUE.

Clarence T. Hagerty, *Chairman*,  
George W. Miles, John D. Tinsley.

### BOARDING.

George W. Miles, *Chairman*,  
John P. Owen, Arthur Goss.

### ENTERTAINMENT.

Walter W. Robertson, *Chairman*,  
Clarence T. Hagerty, George W. Miles.

### LEGISLATION FOR COLLEGE.

Frank W. Brady, *Chairman*,  
George Vestal, John P. Owen.

NOTE.—The President of the Faculty is Ex-Officio member of all committees.



## General Statement.

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### LOCATION.

The New Mexico College of Agriculture and Mechanic Arts is situated at Mesilla Park, about two miles south-east of Las Cruces, Doña Ana County. The college farm, which was donated to the Territory by the citizens of Doña Ana County, is crossed near the center by a fine driveway from Mesilla Park Station to the college buildings. The location is a good one from a sanitary point of view. The campus is high and dry, and there are no surroundings which can breed disease. Its location in the famous Mesilla Valley, favorably known since the Gadsden Purchase, gives it the best advantages for agricultural and horticultural experiments. Visitors are always welcome.

Las Cruces is on the main line of the Atchison, Topeka & Santa Fé Railroad, and is accessible from the different parts of the Territory. It has a population of about 2500 people, and all lines of business are carried on. It has a good public school, several mission schools, and a Catholic Academy for the education of girls. The Presbyterians, Methodists, and Catholics have large congregations and fine churches, and students are welcomed to their services. The town is noted for being the largest fruit and alfalfa shipping point in the Territory, and is rapidly becoming known as one of the finest winter health resorts in the whole country. About two miles away is the quaint old town of Mesilla, long the most noted point in this section of the country, and at one time the seat of government for the whole of the present Territory of Arizona, then a part of Doña Ana county.

## ORIGIN.

The New Mexico College of Agriculture and Mechanic Arts, though under a slightly different name, was established by the Twenty-eighth Legislative Assembly of New Mexico by Act approved February 28, 1889. The purpose of the institution is clearly defined in Section 19, of this Act:—

“The Agricultural College created and established by this Act, shall be non-sectarian in character, and devoted to practical instruction in agriculture, mechanic arts, natural sciences connected therewith, as well as a thorough course of instruction in all branches of learning bearing upon agriculture and other industrial pursuits.”

The branches of learning in which instruction may be given are set forth as follows in Section 20 of the same Act:—

“The course of instruction of the College hereby created shall embrace the English language, literature, mathematics, philosophy, civil engineering, chemistry, animal and vegetable anatomy and physiology, and political, rural, and household economy, horticulture, moral philosophy, history, mechanics, and such other sciences and courses of instruction as shall be prescribed by the regents of this institution of learning.”

By Section 25 of the same Act, the assent of the Legislative Assembly was given to the establishment of Experiment Stations within the Territory of New Mexico in connection with the Agricultural College in pursuance of the Act of Congress approved March 2, 1887, the Hatch Act.

## INCOME.

The revenues of this college are derived from the following sources:—

1. Students' fees.
2. Sale of college farm products.
3. Territorial tax and special appropriations.

4. The United States under Congressional Act of March 2, 1887—the Hatch fund.

5. The United States under Congressional Act of Aug. 30, 1890—the Morrill fund.

The money received from students and from the sale of products from the college farm has, so far, been very limited in amount, and has been used principally for paying expenses not provided for by either of the Acts of Congress.

The Territorial Act creating the institution provided for an annual levy of one-fifth of a mill, commencing with the year 1889. This levy has, so far, yielded an annual income of about \$7,000.

By the United States Law of March 2, 1887, the *Hatch Act*, appropriations are made for the maintenance of Experiment Stations in connection with the Agricultural Colleges in the various states and territories. For the support of each station there is set apart the sum of \$15,000, which is payable quarterly. This money must be used for "paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results." Bulletins showing progress must be printed each quarter, and sent to each newspaper in the Territory and to all farmers who apply for them. This fund first became available for this College in 1889-90 to the amount of \$10,000. Since July 1, 1890, \$15,000 a year has been received. *After the first year, only five per cent of this fund can be used to erect, enlarge, or repair buildings for the use of the Experiment Station.*

The *Morrill fund* was created by the United States law of Aug. 30, 1890, "for the more complete endowment and support of the Colleges of Agriculture and Mechanic Arts in the several states and territories." It is paid over to them before July 31, of each year. The College received this fund first in 1890 to the amount of \$15,000. For the coming fiscal year this fund will be \$22,000 and will increase \$1,000 a year until it reaches

\$25,000, at which sum it will remain. This fund can only be applied "to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their application in the industries of life, and to the facilities for such instruction," *No part of this fund can be used in any way for building purposes.*

#### ENDOWMENT.

When New Mexico becomes a State, it will receive, under the Act of Congress, approved July 2, 1862, a grant of land for endowing the Agricultural College amounting to 30,000 acres for each Senator and Representative in Congress. This would now entitle us to 90,000 acres. If this amount of land be carefully located, it can be made to yield the college in time a fair endowment. The amount of money derived from the sale of this land, without any deduction for expenses, must be safely invested in such manner as to yield not less than five per cent revenue. The interest only can be used for the support of the college.

## Requirements for Admission.

---

To enter the Freshman class of the college, students must be at least sixteen years of age, and unless admitted on diploma, must pass examinations in reading, spelling, arithmetic complete, including the metric system, elementary algebra through quadratics, U. S. history, geography, hygiene as required by the U. S. Law for the Territories, grammar complete, composition, and the elements of rhetoric. Without this preparation they can not succeed in college. Therefore, in the interests of both the college and the student, we shall insist that this preparation be thoroughly made.

All candidates for admission to the college must furnish satisfactory evidence of good moral character.

Students from other Agricultural Colleges will be admitted to corresponding classes in this college upon presentation of certificates showing rank and honorable dismissal.

### COMMISSIONED HIGH SCHOOLS.

The Principals and Superintendents of the High Schools herein enumerated are authorized to prepare students for admission to the New Mexico College of Agriculture and Mechanic Arts:—

Raton High School—P. H. Kirsch, Superintendent.

Las Vegas High School—J. A. Wood, Superintendent.

Albuquerque High School—Chas. E. Hodgins, Superintendent.

Deming High School—J. A. Long, Principal.

Eddy High School—J. W. Gilmore, Principal.

Roswell High School—E. O. Creighton, Principal.

El Paso High School—G. P. Putnam, Superintendent.

Upon presentation of Diplomas, graduates of the above mentioned High Schools will be admitted without examination.

to the course in Stenography and Type Writing or to the Freshman class in any of the Collegiate courses of this institution. Advanced standing may be secured by passing the required examinations.

Students who have completed spelling, reading, grammar, geography, arithmetic, and U. S. history in the public schools of the above named places in a satisfactory manner, and can produce certificates to that effect, will be admitted to the Sub-Freshman "A" class, or to the courses in Bookkeeping or Telegraphy, without examination. Such students must be not less than fifteen years of age.

#### COMMISSIONED GRADED SCHOOLS.

The Principals of the Graded Schools herein named are authorized to prepare students for admission to the Sub-Freshman "A" class, the course in Bookkeeping, and the course in Telegraphy:—

—————, Principal Silver City Graded School.

U. Francis Duff, Principal Socorro Graded School.

D. M. Richards, Principal Gallup Graded School.

—————, Principal Hillsboro Graded School.

J. M. Bunton, Principal Blossburg Graded School.

F. P. Carnes, Principal Clayton Graded School.

T. D. Leib, Principal Springer Graded School.

S. M. Wharton, Principal White Oaks Graded School.

Students of the above named schools, who have completed spelling, reading, grammar, geography, U. S. history, and arithmetic, in a satisfactory manner and hold certificates to that effect, will be admitted without examination to the Sub-Freshman "A" class, to the course in Bookkeeping, or to the course in Telegraphy, provided they be not less than fifteen years of age.

The college reserves the right to withdraw these commissions at any time should the character of the work done fall below the present standard of excellence.



## COURSES OF STUDY.

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The following Collegiate Courses of Study have been provided:—

- I. Agricultural Course.
- II. Irrigation Engineering Course.
- III. Mechanical Engineering Course.
- IV. Scientific Course.

With a very few exceptions, these courses are alike in the Freshman and Sophomore years. For these years, the branches of study have been selected for their value in attaining mental culture, in widening the student's intellectual horizon, and in furnishing the necessary information for the strictly technical studies of the Junior and Senior years. An attempt is made to carefully supplement theory with practice in all courses.

Special courses will not be encouraged by the Faculty. With the variety of regular courses given, there is little need for them. Students of mature years, who are not able to remain long enough to take a full course, may be allowed to take special courses. The Faculty reserves the right to refuse such requests, or to order such modifications as may seem the best for the student and college. No degrees are granted for special work, but those who perform such work in a satisfactory manner will receive certificates.

In the tabular form of the Courses of Study on the following pages, the figure at the right of each subject denotes the number of periods per week. Practice periods are one hour and forty minutes long; all others, fifty minutes.

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### DEGREES.

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The degree of *Bachelor of Science (B. S.)* is conferred on students who satisfactorily complete the work prescribed in any of the four Collegiate courses of study.

## COURSES OF STUDY.—Sub-Freshman.

## "B" Class.

FIRST TERM.	SECOND TERM.	THIRD TERM.
Reading . . . . . 4 United States History . . . 5 Language . . . . . 5 Arithmetic . . . . . 5 Penmanship . . . . . 5 Spelling . . . . . 2½	Reading . . . . . 4 United States History . . . 5 Language . . . . . 5 Arithmetic . . . . . 5 Penmanship . . . . . 5 Spelling . . . . . 2½	Geography (Review) . . . . 4 United States History . . . 5 Grammar . . . . . 5 Arithmetic . . . . . 5 Elementary Physiology . . 5 Spelling . . . . . 2½
"A" Class.		
FIRST TERM.	SECOND TERM.	THIRD TERM.
Algebra . . . . . 5 Commercial Arithmetic . . . 5* Composition and Rhetoric . . 5 Physical Geography . . . . 5 Drawing . . . . . 5 Bookkeeping . . . . . 5 Elocution . . . . . 1 Spelling . . . . . 2½	Algebra . . . . . 5 Commercial Arithmetic . . . 5* Composition and Rhetoric . . 5 Physical Geography, ½ term. . 5 Advanced U. S. His., ½ term. . 5 Word Analysis . . . . . 5 Drawing . . . . . 5 Spelling . . . . . 2½ Elocution . . . . . 1	Algebra . . . . . 5 Commercial Law . . . . . 5* Grammar (Advanced) . . . . 5 Arithmetic (Advanced) . . . 5 U. S. History (Advanced) . . 5 Drawing . . . . . 5 Spelling . . . . . 2½ Elocution . . . . . 1

\*Students who intend to take the Course in Stenography and Typewriting may take Commercial Arithmetic and Commercial Law instead of Algebra.

COURSES OF STUDY.—*Freshman Year.*

AGRICULTURAL.	MECHANICAL ENGINEERING.	IRRIGATION ENGINEERING.	SCIENTIFIC.
Geometry..... 5 Rhetoric..... 5 Ancient History..... 5 English..... 1 Elocution..... 1 PRACTICE. Carpentry and Joinery..... 3½ Freehand Drawing..... 2½	Geometry..... 5 Rhetoric..... 5 Ancient History..... 5 English..... 1 Elocution..... 1 PRACTICE. Carpentry and Joinery..... 3½ Freehand Drawing..... 2½	Geometry..... 5 Rhetoric..... 5 Ancient History..... 5 English..... 1 Elocution..... 1 PRACTICE. Carpentry and Joinery..... 3½ Freehand Drawing..... 2½ Literary Reading..... *2	Geometry..... 5 Rhetoric..... 5 Ancient History..... 5 English..... 1 Elocution..... 1 PRACTICE. Carpentry and Joinery..... 3½ Freehand Drawing..... 2½ Literary Reading..... *2
Geometry..... 5 Med. and Mod. History..... 5 Spanish or Latin..... 5 English..... 1 Elocution..... 1 PRACTICE. Wood Turning..... 3½ Freehand Drawing..... 2½	Geometry..... 5 Med. and Mod. History..... 5 Spanish or Latin..... 5 English..... 1 Elocution..... 1 PRACTICE. Wood Turning..... 3½ Freehand Drawing..... 2½	Geometry..... 5 Med. and Mod. History..... 5 Spanish or Latin..... 5 English..... 1 Elocution..... 1 PRACTICE. Wood Turning..... 3½ Freehand Drawing..... 2½ Literary Reading..... *2	Geometry..... 5 Med. and Mod. History..... 5 Spanish or Latin..... 5 English..... 1 Elocution..... 1 PRACTICE. Wood Turning..... 3½ Freehand Drawing..... 2½ Literary Reading..... *2
Geometry..... 5 Civics..... 5 Spanish or Latin..... 5 English..... 1 Elocution..... 1 PRACTICE. Blacksmithing..... 3½ Garden Work..... 2½	Geometry..... 5 Civics..... 5 Spanish or Latin..... 5 English..... 1 Elocution..... 1 PRACTICE. Blacksmithing..... 3½ Mechanical Drawing..... 2½	Geometry..... 5 Civics..... 5 Spanish or Latin..... 5 English..... 1 Elocution..... 1 PRACTICE. Blacksmithing..... 3½ Mechanical Drawing..... 2½	Geometry..... 5 Civics..... 5 Spanish or Latin..... 5 English..... 1 Elocution..... 1 PRACTICE. Blacksmithing..... 3½ Freehand Drawing..... 2½ Literary Reading..... *2

\*Prescribed work for women instead of Carpentry, Wood Turning and Blacksmithing.

*COURSES OF STUDY.—Sophomore Year.*

AGRICULTURAL.	MECHANICAL ENGINEERING	IRRIGATION ENGINEERING.	SCIENTIFIC.
<p>Advanced Algebra..... 5  Physics..... 5  Spanish or Latin..... 5  Botany..... 5  English..... 1  Elocution..... 1  PRACTICE.  Farm Work..... 2½</p>	<p>Advanced Algebra..... 5  Physics..... 5  Spanish or Latin..... 5  Descriptive Geometry..... 5  English..... 1  Elocution..... 1  PRACTICE.  Carpentry..... 3½</p>	<p>Advanced Algebra..... 5  Physics..... 5  Spanish or Latin..... 5  Descriptive Geometry..... 5  English..... 1  Elocution..... 1  PRACTICE.  Carpentry..... 3½</p>	<p>Adv. Algebra or Recent Hist.. 5  Physics..... 5  Spanish or Latin..... 5  Botany..... 5  English..... 1  Elocution..... 1  PRACTICE.  American Classics..... 2½</p>
<p>Trigonometry..... 5  Physics..... 5  Spanish or Latin..... 5  English..... 1  Botany..... 2  Elocution..... 1  PRACTICE.  Farm Work..... 2½</p>	<p>Trigonometry..... 5  Physics..... 5  Spanish or Latin..... 5  English..... 1  Elocution..... 1  PRACTICE.  Mechanical Drawing..... 2½  Foundry and Pattern Making..... 3½</p>	<p>Trigonometry..... 5  Physics..... 5  Spanish or Latin..... 5  English..... 1  Elocution..... 1  PRACTICE.  Mechanical Drawing..... 2½  Foundry and Pattern Making..... 3½</p>	<p>Trig. or Recent History..... 5  Physics..... 5  Spanish or Latin..... 5  English..... 1  Botany..... 2  Elocution..... 1  PRACTICE.  Scientific Drawing..... 2½</p>
<p>Horticulture..... 4  Physics..... 4  Spanish or Latin..... 5  English..... 1  Surveying..... 2  Elocution..... 1  PRACTICE.  Botanical Laboratory..... 5  Surveying..... 2</p>	<p>Higher Algebra..... 4  Physics..... 4  Spanish or Latin..... 5  English..... 1  Surveying..... 2  Elocution..... 1  PRACTICE.  Graphic Statics..... 2½  Foundry and Pattern Making..... 3½</p>	<p>Higher Algebra..... 4  Physics..... 4  Spanish or Latin..... 5  English..... 1  Surveying..... 2  Elocution..... 1  PRACTICE.  Graphic Statics..... 2½  Surveying..... 3</p>	<p>Eng. Hist or Higher Algebra. 4  Physics..... 4  Spanish or Latin..... 5  English..... 1  Surveying..... 2  Elocution..... 1  PRACTICE.  Botanical Laboratory..... 5  Surveying or *Home Hygiene. 2</p>

\*Optional for women.

*First Term.*

*Second Term.*

*Third Term.*

COURSES OF STUDY.—*Junior Year.*

AGRICULTURAL	MECHANICAL ENGINEERING.	IRRIGATION ENGINEERING.	SCIENTIFIC.
Agriculture..... 4 English Literature..... 4 Political History..... 4 English..... 5 Physiology..... 1 Elocution..... 1 PRACTICE. Farm Work..... 2½	Analytic Geometry..... 5 English Literature..... 4 Elementary Mechanics..... 5 English..... 1 Elocution..... 1 PRACTICE. Machine Shop..... 3½ Elementary Machine Design.. 2½	Analytic Geometry..... 5 English Literature..... 4 Elementary Mechanics..... 5 English..... 1 Elocution..... 1 PRACTICE. Surveying and Mapping..... 3½ Topographical Drawing..... 2½	Analytic Geometry, Spanish or Latin..... 5 English Literature..... 4 Political History..... 4 English..... 1 Physiology..... 5 Elocution..... 1 PRACTICE. Biological Laboratory..... 2
Systematic Zoology..... 5 Chemistry..... 10 English Classics..... 4 English..... 1 Elocution..... 1 PRACTICE. Animal Husbandry..... 2½	Analytic Geom. & Calculus... 5 Hydraulics..... 5 English Classics..... 4 English..... 1 Elocution..... 1 PRACTICE. Machine Shop..... 3½ Elementary Machine Design. 2½	Analytic Geom. & Calculus... 5 Hydraulics..... 5 English Classics..... 4 English..... 1 Elocution..... 1 PRACTICE. Surveying and Mapping..... 3½ Foundations, Stereotomy and Masonry..... 2½	Analytic Geom. & Calculus, Spanish or Latin..... 5 Chemistry..... 10 English Classics..... 4 English..... 1 Elocution..... 1 PRACTICE. Biological Laboratory..... 2½
American Literature..... 5 Stock..... 5 Horticulture..... 5 English..... 1 Elocution..... 1 PRACTICE. Chemical Laboratory..... 5	Calculus..... 5 Strength of Materials..... 5 Mechanism..... 5 English..... 1 Elocution..... 1 PRACTICE. Machine Shop..... 3½ Elementary Machine Design.. 2½	Calculus..... 5 Strength of Materials..... 5 Mechanism..... 5 English..... 1 Elocution..... 1 PRACTICE. Geodetic Surveying..... 2½ Engineering Structures..... 3½	Calculus or American Lit..... 5 Systematic Zoology..... 5 Psychology..... 5 English..... 1 Elocution..... 1 PRACTICE. Chemical Laboratory..... 5

First Term.

Second Term.

Third Term.



*COURSES OF STUDY.—Senior Year.*

	AGRICULTURAL.	MECHANICAL ENGINEERING.	IRRIGATION ENGINEERING.	SCIENTIFIC.
<i>First Term.</i>	Agriculture..... 5 Geology..... 5 Entomology..... 5 English..... 1 Elocution..... 1 PRACTICE. Chemistry, Botany, Zoology, { 6 Agric., or Horticult.... }	Analytic Mechanics..... 5 Geology..... 5 Steam Engineering..... 5 English..... 1 Elocution..... 1 PRACTICE. Machine Shop..... 3½ Elementary Machine Design. 2½	Analytic Mechanics..... 5 Geology..... 5 Irrigation Engineering..... 5 English..... 1 Elocution..... 1 PRACTICE. Irrigation Surveying..... 3½ Roofs and Bridges..... 2½	Logic..... 5 Geology..... 5 Entomology..... 5 English..... 1 Elocution..... 1 PRACTICE. Chemistry, Botany, or Zoology 6
<i>Second Term.</i>	Horticulture..... 5 Diseases of Animals..... 5 Geology..... 5 English..... 1 Elocution..... 1 PRACTICE. Chemistry, Botany, Zoology, { 6 Agric., or Horticult.... }	Analytic Mechanics..... 5 Chemistry..... 10 English..... 1 Elocution..... 1 PRACTICE. Machine Shop..... 3½ Steam Engine Design..... 2½	Analytic Mechanics..... 5 Chemistry..... 10 English..... 1 Elocution..... 1 PRACTICE. Irrigation Surveying..... 3½ Roofs and Bridges..... 2½	History of Civilization..... 5 History of Philosophy..... 5 Geology..... 5 English..... 1 Elocution..... 1 PRACTICE. Chemistry, Botany, or Zoology 6
<i>Third Term.</i>	Economic Bot. and Entomol. 5 Political Economy..... 5 Themes..... 5 PRACTICE. Thesis..... 6	Engine and Boiler Tests..... 5 Political Economy..... 5 Themes..... 5 PRACTICE. Thesis and Thesis Drawings.. 6	Astronomy..... 5 Political Economy..... 5 Themes..... 5 PRACTICE. Thesis and Thesis Drawings.. 6	Astronomy..... 5 Political Economy..... 5 Themes..... 5 PRACTICE. Thesis..... 6



## DEPARTMENTS OF INSTRUCTION.

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### AGRICULTURE AND HORTICULTURE.

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GEORGE VESTAL, PROFESSOR.

Agriculture and Horticulture involve a larger number of sciences than any other human employment, and become a fit sequence to a collegiate training. It is the policy to give this department of the college the largest development practicable, and to meet the full demand for agricultural education as fast as it shall arise.

It is the aim of this department to teach agriculture in such a way as to give the student a correct understanding of the scientific principles which underlie the operations of the farm. In the class room, the subjects are taught by lectures, and careful readings of standard agricultural and horticultural books and periodicals, and frequent discussions, oral and written, by the students of the principles taught. The practice consists of work on the Experiment Station Farm, orchards, vineyards, gardens, campus, etc., under the supervision of a skilled person with a view of putting into practice the theories advanced in the class room. The practice will be within lines having a direct bearing on the class room work outlined in the course of study. In these studies, students will be required to take and preserve notes as a record of the work done in the class room and field.

During the third term of the Freshman, and the first and second terms of Sophomore years, students will receive practical instruction on the Farm and in the Garden, which will consist of the composition and proper preparation of soils, manures, etc.,

and growth of such plants as are of use to the farmer. In the third term Sophomore year, fruit culture will be taught (using Barry's Fruit Culture as a text-book), which includes instructions for propagating fruit trees and plants by seeds, cuttings, layers, suckers, grafting and budding; the planting and general management of orchards, vineyards, and small fruit gardens; and the extermination of fungi and insect pests by spraying and other means.

In the first term of the Junior year, students will receive lectures aided by text-book work on the following subjects: fences and farm buildings, farm machinery, rotation of crops, and other subjects which are of importance to farmers. The third term of this year the student will receive instruction by text-book on all points necessary to successfully conduct the growing of vegetables for market and private use; and on stock-breeding, using Miles' Stock Breeding as a text-book.

The first term of the Senior year will be devoted to the study of crops adapted to this climate, drainage, irrigation, and meteorology. The second term of this year will consist of text-book work in landscape gardening and forestry. In the work on diseases of animals text-books will be used. In the third term instruction will be given in floriculture by lectures, supplemented by practice in the greenhouse now being erected. Students who wish may choose a practice in agriculture or horticulture for three hours a day throughout the Senior year.

*Equipment.*—The Experiment Station farm, which includes the gardens, orchards, and vineyards, contains a large collection of all the leading fruit trees and plants, and furnishes a large amount of work for agricultural students, where they have an opportunity of observing the operations usually carried on on a well regulated farm. The Greenhouse will be finished and well filled with a choice collection of plants by the time the new year begins. The library contains a well selected assortment of agricultural and horticultural books and periodicals.

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**CHEMISTRY.**

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ARTHUR GOSS, PROFESSOR.

R. F. HARE, INSTRUCTOR.

*Required Chemistry.*—The course in chemistry, taken by all regular students, occupies the second and third terms of the Junior year.

The work during the second term of the Junior year will consist of a study of the fundamental principles of the science, as outlined in Remsen's chemistry. This work will be supplemented by frequent exercises in the laboratory. The time required of the students this term, besides that necessary for the preparation of lessons, will be two hours daily.

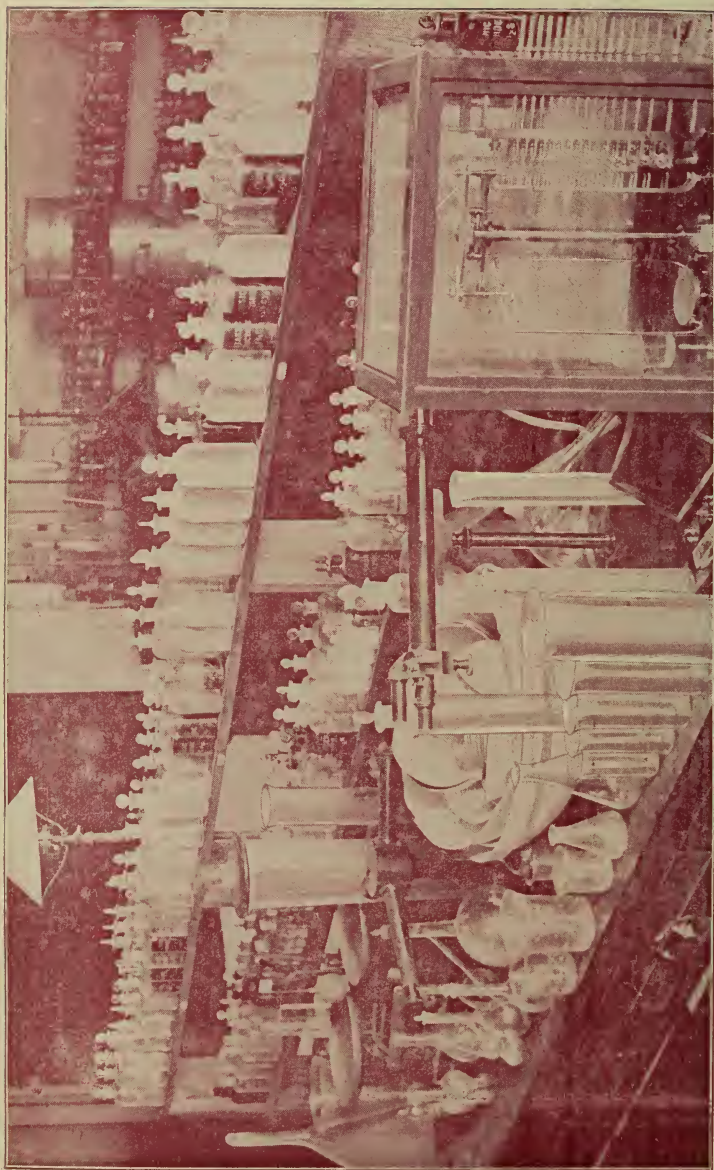
During the third term of the Junior year, two hours daily will be spent in the laboratory in the study of qualitative analysis. Each student will be provided with a complete set of apparatus and reagents, by means of which any ordinary compound may be analysed. The student will thus learn, by actual practice, the various methods of separating the different elements. Hill's Qualitative Analysis will be used as a guide in this work.

*Elective Chemistry.*—Chemistry has been introduced, two hours daily throughout the Senior year, as one of several elective studies. In this way more time can be devoted to that branch of science in which the student is particularly interested.

For the students who select chemistry, the work of the first term of the Senior year will consist of laboratory practice in general quantitative analysis. During this term students will receive instruction in the use of the balance and in general quantitative manipulation. Each student will be required to make some of the fundamental quantitative determinations, such as chlorine, sulphuric acid, and lime, thus becoming familiar with quantitative processes by actual practice.

The nature of the work done during the last two terms of





STUDENTS' CHEMICAL LABORATORY.



the Senior year, will be left largely to the choice of the student but in general will consist of work along some line of chemical investigation. Thus an investigation may be undertaken concerning waters, soils, ores, forage plants, methods of analysis or whatever subject the student may be particularly interested in, provided the same is approved by the professor in charge of the department.

*Equipment.*—Two rooms and a smaller store-room in the basement of the main building are at present used for the chemical work. A seventy-five light gasoline gas machine furnishes an adequate gas supply for this department. The room formerly used for the chemical laboratory has been entirely refitted and now has, besides a sink and fume closet, a brick covered furnace table and two well constructed work desks. These desks are supplied with gas and water pipes, drawers and lockers for apparatus, and racks for reagent bottles. Students are supplied with a full set of apparatus for laboratory work. This includes, among other things, beakers, test tubes, gas burners, porcelain dishes, flasks, wash bottles, platinum foil and wire, ring stands, filter stands, funnels, test tube racks, spatulas, tongs, blowpipes, and a full set of reagent bottles.

Another room has been fitted up with special reference to the accommodation of the Experiment Station work. This laboratory contains, among other things, a work desk which is supplied with gas, water, and an air exhaust pipe for rapid filtration, a commodious hood to carry off noxious gases, apparatus for the determination of Nitrogen by the Kjeldahl method, a titration shelf and system of burettes, a balance table supported by posts in contact with the ground, a Springer torsion balance, a Herzberg and Kuhlmann short beam automatic analytical balance, a Scheibler's polariscope, an imported mill for grinding food-stuffs, etc., and about 400 dollars worth of platinum ware.

While the Station Laboratory is not designed for the use of



students, the work carried on there will serve to illustrate what actual practical analytical work is like.

The chemical department also possesses a Becker's analytical balance, an Eimer and Amend gold plated assay balance sensitive to 1-200 of a milligram, a Troemner's solution balance, a first-class Bunsen's spectroscope, a Bosworth ore crusher, plate and rubber, set of sieves for sampling, a plant of Brown's assay furnaces, a set of Hoskin's gasoline furnaces, a good supply of crucibles, scorifiers, cupels, tongs, etc., for the assay of ores, a collection of mineral specimens, and quite a large department library of standard books and periodicals for reference.

At the beginning of the work in chemistry in the Junior year and also at the beginning of the chemical work in the Senior year, each student will be required to deposit five dollars, (\$5.00), with the College Clerk to cover breakage of apparatus. At the close of the year, or upon withdrawing from the class, the balance of the deposit, after deducting the cost of broken apparatus, will be returned to the student.

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## BIOLOGY.

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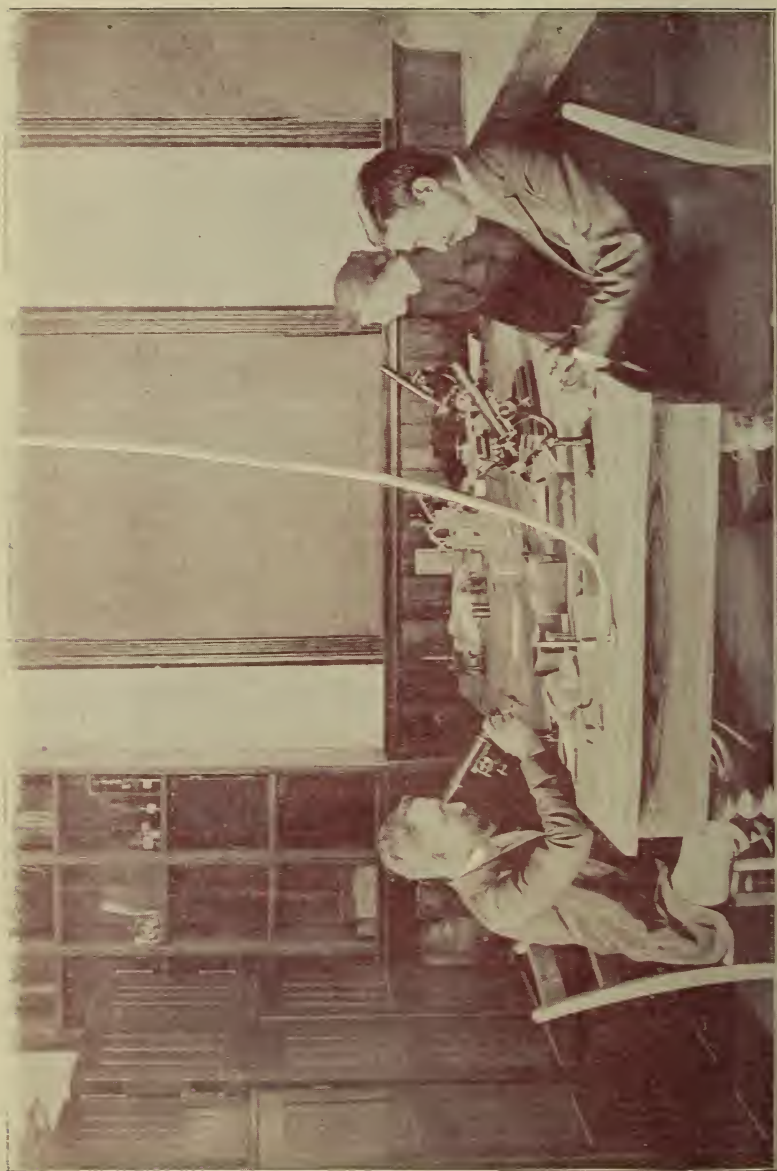
J. D. TINSLEY, PROFESSOR.

*Elementary Botany.*—During the first term, Sophomores of the Agricultural and Scientific courses will devote five recitation periods per week to the study of phænogamic botany. A part of the time will be used in studying briefly the general features of cryptogams, as well as the more important and introductory points of physiological botany.

Plants which are typical of the various grander divisions of the plant kingdom will be analyzed and classified as a part of the class work, and all students will be required to prepare and name a few specimens for the college herbarium.

In this work Gray's text-book is taken as the guide, and





BOTANICAL LABORATORY.

Coulter's Flora of the Rocky Mountain Region is used for analysis and classification.

*Advanced Botany.*—Sophomores of the above mentioned courses will devote two periods per week in the second term to the further study of cryptogamic botany, special attention being paid to the classification of plants.

During the third term of this year the same students will spend two periods, five time per week, in the laboratory studying the minute anatomy of plants.

For this work the college is supplied with Bausch and Lomb's Compound "Model" microscopes, with magnifying power of from 50 to 300 diameters, as well as books of reference, reagents, microtome, and all other apparatus necessary.

The method of work will be the study, from living and alchoholic specimens, of the simple vegetable cell and its various modifications, cell contents, tissues, and tissue systems of the plant. This will include the simplest as well as the most complex forms of plant-life and will be so arranged as to give the student a good outline view of the whole vegetable kingdom.

The intention is to attempt nothing but a good foundation for future work of any special line, leaving to the student the option of carrying on the work, or not, as he may choose. The design of the course is to arouse interest in and induce careful observation of animate nature around us, and at the same time to teach the students to draw conclusions from observations, and to classify ideas as well as objects.

Juniors of the Scientific course will spend four hours per week during the first term in the laboratory continuing the work done in the last term of the preceding year. Students in this work will be assigned the duty of investigating, as completely as time will allow, some one particular plant, endeavoring to get as thorough a knowledge of its structure and methods of growth and reproduction as is possible. The selection of the work for

each particular student will be largely at his own option depending on his ability and the material at hand.

*Economic Botany.*—Seniors of the Agricultural course will spend five recitation periods per week during the third term studying that part of botany and entomology which is of special commercial importance to the farmer and horticulturist.

The work of this class will be the study of injurious fungi and insects and the remedies for them; the best means of applying fungicides and insecticides, the times of application, the best methods of this new science which has been worked out by careful experimentation within recent years. The whole subject will be made as eminently practical as possible in the time allotted and with the facilities at hand.

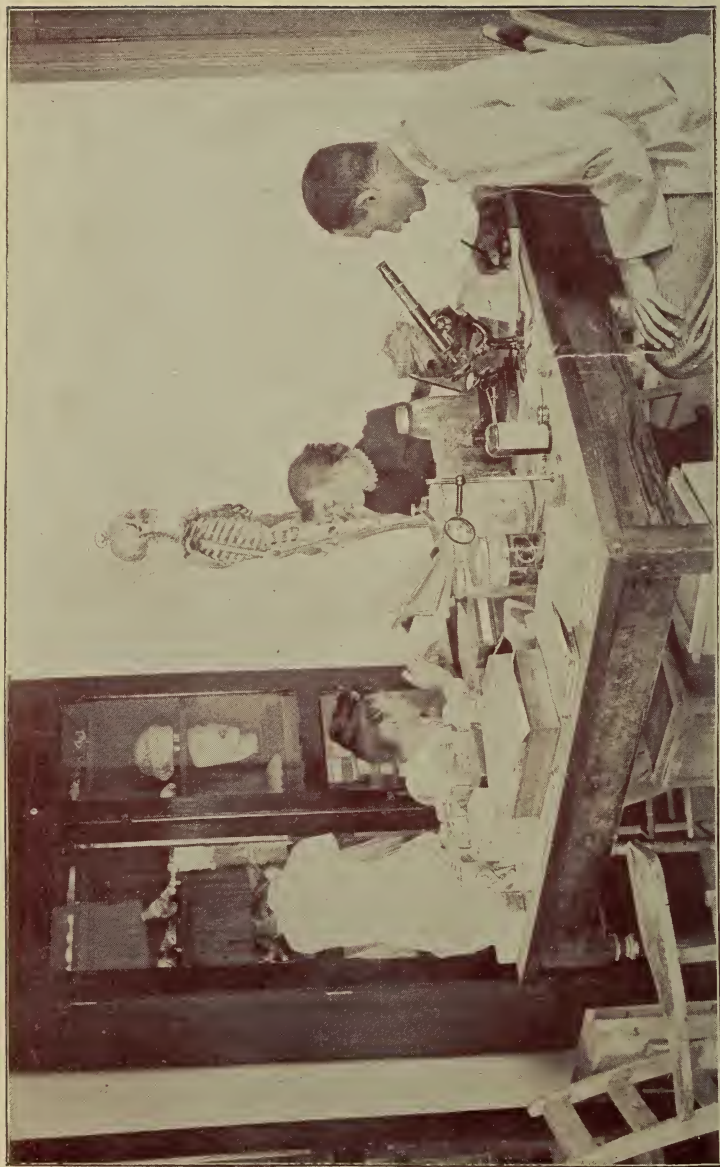
For the first term's work in botany, the students have access to the department library which contains a large number of valuable books of reference. Among others may be found Chapman's Flora of the Southern United States, Gray's Flora of North America, the Botany of King's Survey of the 40th Parallel, Botany of Wheeler's Survey of the 100th Meridian, Botany of the Mexican Boundary Survey, Botany of the Pacific Railroad Survey, General Plantarum, and many other valuable books on organography and systematic botany. For comparative study and reference students also have access to the college herbarium, which now contains specimens from many parts of the United States.

Students in the advanced botany classes will find some of the standard works on physiological and histological botany in the library; such as, Sachs on the Physiology of Plants, Strasburger's Manual of Histology, DeBarry on Morphology and Biology of Fungi, Mycetozoa, and Bacteria, the same author on Comparative Anatomy of Phanerogams and Ferns, Crookshank on Bacteria, and many others.

Students are held responsible for any damage to instruments







PHYSIOLOGICAL AND ZOOLOGICAL LABORATORY.



intrusted to their care unless they can prove that they were not the cause of such damage.

Students who so desire have the option of electing advanced work in Botany during the whole of the Senior year. This option is offered in the expectation that such students will use this time in gathering material for their thesis work in the last term of the Senior year.

*Entomology* is taught in the first term of the Senior year, but may extend over the whole of that year, under the name of elective science practice. In the Agricultural course, the subject is treated from the economic standpoint, while for the students of the Scientific course it is in the main an educational study, intended to develop scientific habits of thought. No attempt is made to instruct the student in all branches of Entomology; but as soon as he has attained a slight general knowledge of the subject, he is given some group of insects to examine and classify. Experience shows that much miscellaneous entomological knowledge, diligently acquired by the student while in class, can not be easily retained after graduation; because, even if he gives considerable leisure time to the study, the complexity of it soon becomes bewildering, and he loses interest. On the other hand, if he takes up a single group, collects specimens, preserves them, classifies them, and notes the habits of the several kinds, he gets an excellent training in scientific method, the effects of which can never entirely pass away. He observes the way in which the different forms are related to their environment, he gets a practical knowledge of the meaning of *genus* and *species*, he comes habitually to look for minute distinctions and judge as to their value, he learns the proper use of scientific books, and, it is hoped, comes to appreciate more keenly than ever before the beauty in nature which everywhere surrounds him. And if he keeps up his work as a recreation study after leaving college, he finds himself well

informed about one group of insects, and capable of continuing their study without bewilderment, thus adding to scientific knowledge.

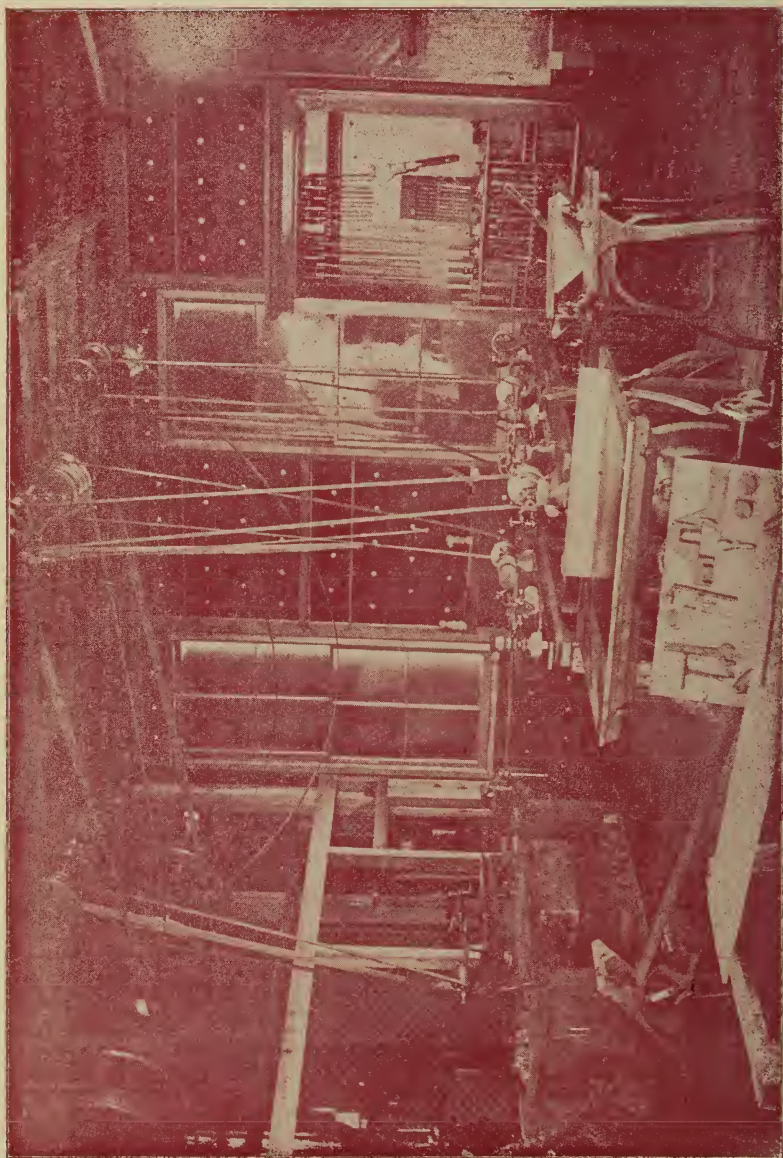
*Zoology* is taught in the second term of the Junior year; and is intended to be introductory, so far as possible, to the entomological or zoological work to be done in the Senior year.

*Physiology* comes in the first term of the Junior year, and is taught mainly with an eye to questions affecting the human body, the proper understanding of which is so necessary for the well-being of a community. With similar ends in view, lectures on Hygiene have been arranged for ladies in the third term in the Sophomore year. Apart from these considerations, however, the study of human Physiology forms an excellent introduction to the comparative anatomy and physiology which follows later in connection with various zoological studies.

*Scientific Drawing* has been placed in the second term of the Sophomore year in the Scientific course. It had been found that so many students, on taking up Zoological studies, were unable to draw in any satisfactory manner, hence the introduction of this study.

*Equipment.*—The department has all the usual appliances, including some excellent models for use in teaching Physiology. During the past year the literature on Hymenoptera has been largely increased, for the advantage of students in Entomology, who are doing more or less original work. It should not be forgotten, in this connection, that the collections of the Experiment Station are available to students, and that original investigations in connection with the Station are continually being carried on under their observation.





WOOD SHOP.

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**ENGINEERING AND PHYSICS.**

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FRANK W. BRADY, PROFESSOR.

CHARLES MILLS, INSTRUCTOR IN SHOPS.

This department offers two regular courses, each four years in length:—

I. Mechanical Engineering.

II. Irrigation Engineering.

Instruction is given by lectures, recitations and practice so combined as to constitute a symmetrical course of study. The endeavor is to provide the student with a broad foundation of general and theoretical knowledge, together with a liberal amount of actual practice in his chosen profession.

During the first two years, the studies of both courses are identical. The great difference between the courses is to be found in the nature of the practice work and drawing. The mechanical students confine themselves to shop work and mechanical drawing, while the students in irrigation work undertake instead, surveying operations, mapping and topographical drawing.

In each course, much time is necessarily devoted to higher mathematics and technical subjects; yet certain other fundamental studies, necessary for a broad and liberal education, such as history, civics, political economy, languages, literature, chemistry, and elocution, are amply provided for.

**I.—MECHANICAL ENGINEERING.**

In this course the student is given a thorough training in the *theoretical* branches underlying the science of machines, together with a clear understanding of the practical construction of mechanical devices. In addition to the advanced mathematical and general studies common to other courses, this course includes instruction in Free-hand and Mechanical Drawing, Descriptive Geometry, Theoretical and Applied Mechanics, Hydraulics,



Strength of Materials, Machine Design, Steam Engineering, and Shop Practice.

*Free-hand Drawing.*—The importance of free-hand drawing as a discipline for the powers of observation can hardly be over estimated. It educates the eye to note accurately all details of position and form, and trains the mind and hand to reproduce correctly what the eye sees. All Freshman students are required to take free-hand drawing, five hours per week, for the entire year; except the Engineering students, who will commence mechanical drawing in the third term of that year.

*Mechanical Drawing.*—This subject embraces instruction in the use and care of drafting instruments, exercises in geometrical construction, lettering, plane projections, shading and coloring; followed by detail and assembled working drawings of machinery, with tracings and blue prints therefrom.

Throughout the Junior and Senior years, mechanical drawing is merged into machine design, of which it forms an important part, and affords constant opportunity for further practice in making detail working drawings of standard types of machinery.

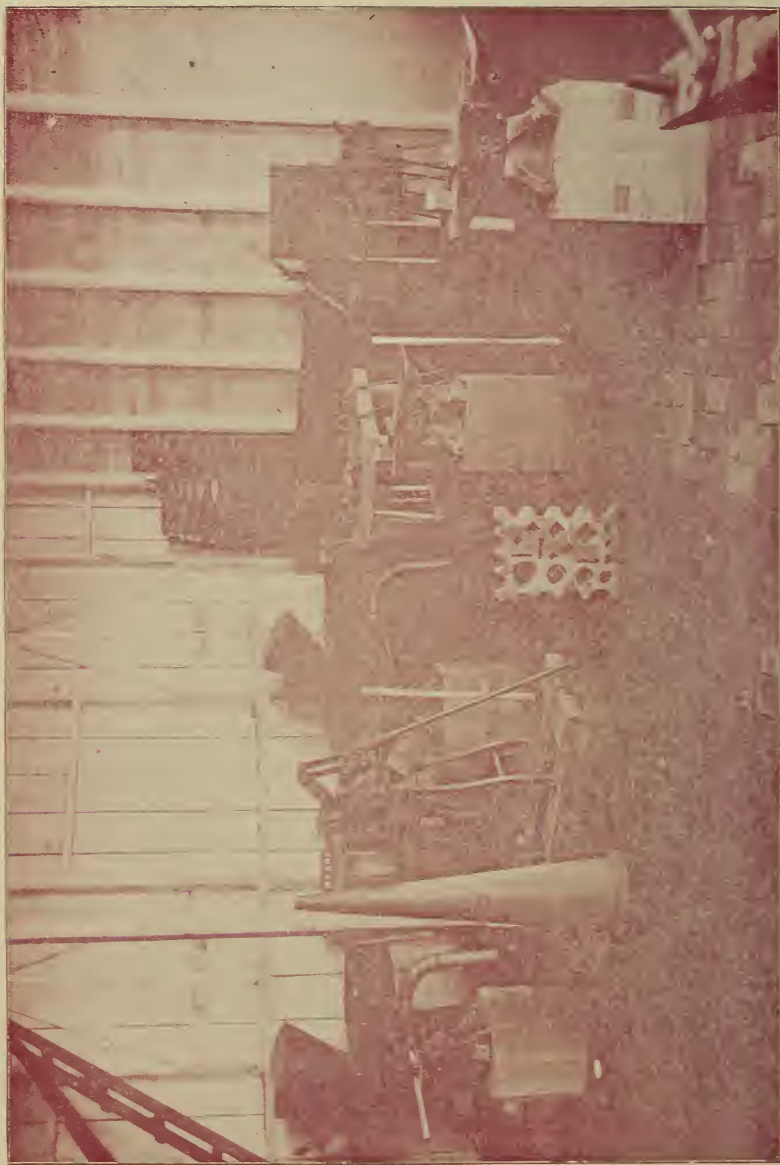
*Descriptive Geometry* is taught to those electing either of the Engineering courses. The principles of orthographic projection, developments of lines and surfaces, etc., are fully discussed in the class room; and a great variety of problems, illustrating both general and special cases, are solved and constructed by the student.

In *Mechanics* the general laws of statics and dynamics are studied with reference to solids, liquids, and gases: and the fundamental principles are applied to the solution of a wide range of problems.

*Hydraulics* includes the study and application of the theoretical principles of the subject to the various problems involved; such as the flow of water through long pipes, in conduits, canals, and rivers; gauging of streams, measurement of water power, etc.







FORGE SHOP.

*Strength of Materials.*—This subject includes the study of the characteristics, method of manufacture, and useful properties of the various materials of construction; and an investigation of their strength, elasticity, and other physical properties.

*Machine Design.*—This work is done principally in the drawing rooms, and consists in the design of the elements of machinery, such as nuts and bolts, rivets and riveted joints, journals and bearings, pulleys, gears, etc.

In *Steam Engineering* the student makes a study of the various types of Engines and boilers in common use, and investigates the many problems relating to their structure and efficiency.

*Shop Practice*, offering, as it does, practical illustrations of the precepts taught in the class room, is a most essential part of the Mechanical course, and this work is given a prominent position in that course. At the same time, it is believed that this training is valuable for men in every walk of life. Accordingly every male student in the regular college courses is required to take Shop Practice during the Freshman year. This work consists of one term in Carpentry, one in Wood Turning, and one in Blacksmithing. For the regular Mechanical Engineering students, the manual training will continue four years, and it will embrace, in addition to that in the Freshman year, Foundry work and Pattern Making and general Machine work.

*Equipment.*—The department has two commodious buildings devoted exclusively to its work,

One of these buildings has rooms for blacksmith shop, foundry, and storage. The large new building, just being completed, contains two large recitation rooms and a hall in front, an engine and boiler room, and has a wing with rooms for wood work, and for machine work.

In the forge room are six forges of the latest model, with improved underground arrangements of the blast and exhaust pipes. Each forge is fitted with a full assortment of tongs, hammers,

swages, fullers, etc. An 18-inch drill press and a punching and shearing machine form a part of the outfit of this section.

The wood room has five turning lathes, one combination rip and cross-cut circular saw, one Fox trimmer, a forty-inch grindstone, and a good supply of small tools and appliances. Also the following machines have been ordered for the coming year: one 18 inch x 10 foot double end pattern maker's lathe, one 16 inch x 10 foot special wood lathe, one 18 inch x 6 inch surface planer, one No. 3 patent strain scroll saw.

For the machine room, there have been ordered one 16 inch x 6 foot tool room lathe with compound rest and taper attachment, one 14 inch x 8 foot standard engine lathe, one 24 inch x 24 inch x 6 foot planer, one 22 inch power drill press, one improved emery wheel grinder; also a large number and good assortment of chucks, drills, small tools and machine attachments.

The power equipment, including the new items ordered, consists of one 8-H. P. Shipman engine and boiler, one 30-H. P. Weston automatic engine, one 40-H. P. tubular boiler, feed water purifier, and Duplex pump, water separator, etc.

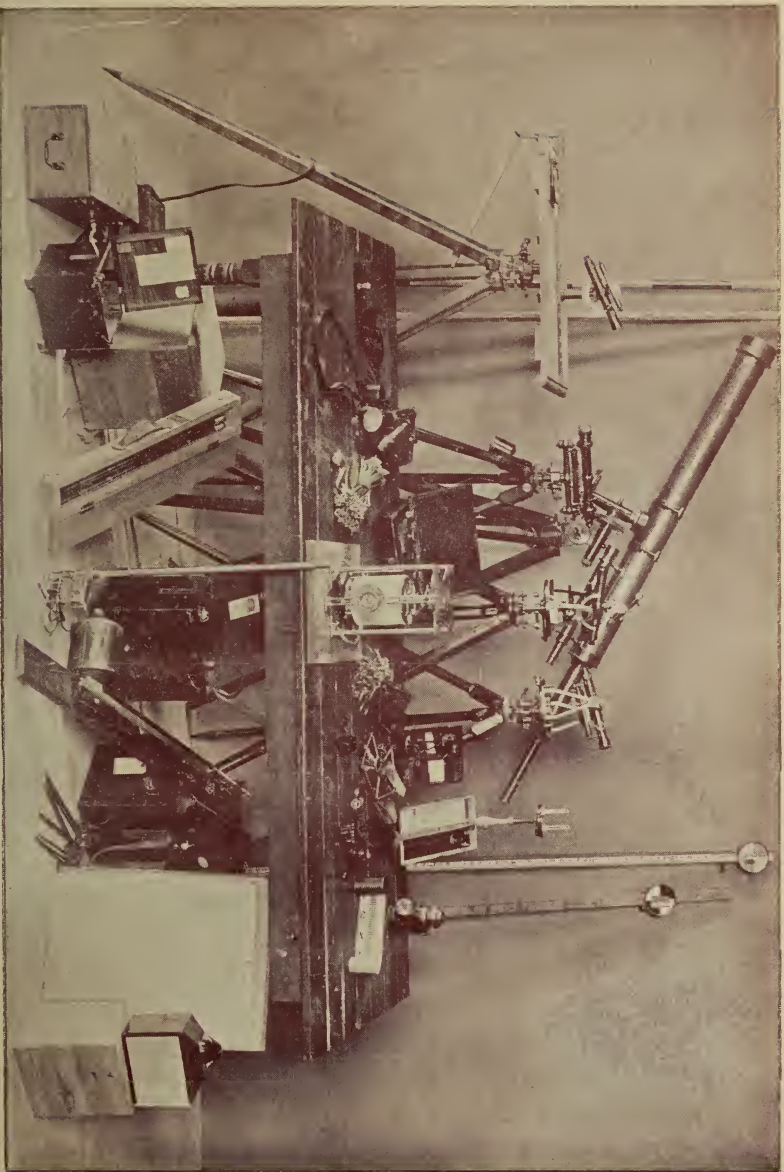
## II.—IRRIGATION ENGINEERING.

This course is intended to cover so much of the scope of Civil Engineering as applies to the construction and operation of irrigation works.

The course, in addition to the general studies common to the other College courses, includes instruction in Mechanics, Surveying, Geodesy, Hydraulics, Roof and Bridge Design, Foundations, Drawing, and Field Practice.

The *Equipment* of the Irrigation Department consists of a varied assortment of expensive engineering instruments and appliances necessary for carrying out the work as outlined.

The equipment consists of a surveyor's compass, two surveyor's transits, one of which has a gradienter and solar attach-



IRRIGATION ENGINEERING EQUIPMENT.





ment, engineer's level, plane table, aneroid barometer, river meter and register, hook guage, polar planimeter, hand level and clinometer, optical square, pantograph, chains, steel tapes, leveling rods, poles, etc.

This department has also a fine large collection of valuable reference books.

#### THESIS.

As a condition of graduation, each Senior in the Engineering courses must prepare an acceptable Thesis and Thesis Drawing which shall remain the property of the College.

An excellent department Library, containing standard works on nearly every subject pertaining to the engineering profession, is accessible to the students.

*Physics.*—This subject is required of all regular students during the Sophomore year. The College is equipped with a considerable amount of apparatus, which is used both in class room and in individual laboratory practice.

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### MATHEMATICS.

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C. T. HAGERTY, PROFESSOR.

*Geometry.*—The Freshman class study plane geometry in the first and second terms, and solid and spherical geometry and a brief treatise on conic sections in the third term. Original exercises form a large part of the work throughout the year, and constitute an important factor in examinations. Wentworth's Plane and Solid Geometry is the text-book used.

*Algebra.*—All students admitted to the Freshman class have completed algebra through quadratics in Milne's High School Algebra, or an equivalent. The advanced algebra, taught in the first term of the Sophomore year, embraces the following subjects: progressions, indeterminate equations, inequalities,



scales of notation, variables and limits, theory of numbers, and logarithms. At the beginning of the term some time will be devoted to a review of the more difficult subjects of elementary algebra. In the third term of the Sophomore year, higher algebra is taught, which includes permutations and combinations, undetermined co-efficients, binomial theorem (any exponent), series, and theory of equations.

*Trigonometry.*—Plane trigonometry is taught during the first eight weeks of the second term of the Sophomore year; and spherical trigonometry, during the last four weeks. The functions are treated both as ratios and lines. The fundamental formulae are carefully deduced, and many practical problems are solved. In order to get a clear conception of the measurement of angles, students use protractors, trigonometer, and a surveyor's transit.

*Analytic Geometry.*—All students in the Engineering courses are required to study plane analytic geometry during the first term of the Junior year. They solve many problems in order to become familiar with the methods of the subject. Several of the higher plane curves and geometry of three dimensions are studied during the first five weeks of the second term.

*Calculus.*—Engineering students are required to study the differential and integral calculus during the last eight weeks of the second term of the Junior year, and also during the third term. Both the method of rates and that of limits are employed. Taylor's Elements of Calculus is the text-book used.

The instruction in all branches of mathematics is made as practical as possible.

Women are not required to pursue the mathematical studies after the Freshman year, but they may continue the work in mathematics if they desire to do so. After the second term of

the Sophomore year, the mathematical studies are optional for all students in the Scientific course.

This department has Kennedy's dissected geometrical blocks, a 24 inch slated globe, trigonometer, and valuable books of reference.

### ASTRONOMY AND GEOLOGY.

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G. W. MILES, PROFESSOR.

*Astronomy.*—This subject will be taught one term to the Senior students of the Engineering and Scientific Courses. Descriptive, practical, and historical astronomy will be given special attention, and mathematical astronomy will be taught as far as the limited time devoted to the subject will permit.

This department has a portable 5 inch telescope, star lantern and slides, star atlas, a planisphere, many valuable books of reference, and several periodicals.

*Geology.*—There are two terms devoted to this subject. The first term of the Senior year will be given to mineralogy and physical, structural, and dynamical geology. The second term will be devoted entirely to historical geology and paleontology.

Though the equipment of this department is limited, there are some very good specimens of minerals and a number of fossils of various geological ages.

### HISTORY AND POLITICAL SCIENCE.

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JOHN P. OWEN, PROFESSOR.

*History.*—U. S. History is completed in the Sub-Freshman Department, as is also a short course in the elements of civil government. Ancient history is studied by all students in the first term of the Freshman year; mediæval and modern history, by

all in the second term of the same year. English history will be studied by the students of the Scientific and Agricultural courses in the third term of the Sophomore year. The subject of Recent History is optional with the mathematics for the women of the scientific course in the first and second terms of the Sophomore year.

In the study of history the aim is not so much to memorize facts, as to understand them. As far as practicable the "Semi-nary" plan will be used, the object being to train the student to think for himself and to lead him to consult *historical sources*.

In general history, Sheldon's History is used as the text-book; in English history, Montgomery's, supplemented by Green's History of the English People. Although text-books are used, the instruction is largely supplemented by readings and lectures.

One of the objects of this course is to inculcate in the student a love for the study of history, and to teach him to form his own conclusions from the facts presented.

The library to which the students have access contains a very fair amount of first-class historical literature, which covers well the general field of history. Students in all history courses will be required to prepare three papers each term on subjects assigned. An excellent set of historical maps has been added to this department.

*Political Science.*—The subject of civil government, supplemented by lectures on constitutional law, is taken by all students in the third term of the Freshman year. The text-books used are: Fiske's Civil Government, Woodrow Wilson's The State, Cooley's Principles of Constitutional Law, and McCleary's Civics.

Constitutional and political history lectures are given to students of the Agricultural and Scientific courses in the first term of the Junior year. Johnston's American Politics and Burgess' Political Science are used.

*Political Economy.*—This subject is pursued during the third term of the Senior year. Instruction will be given by means of recitations and lectures.

The current practical problems of industrial society are also discussed on the basis of economic principles. Each student will be required to prepare an original paper upon some topic which will be assigned him.

The present industrial and financial embarrassment shows the importance of a knowledge of economic principles. The relations of capital to labor, the tariff, *bi-metallism*, banking, and other important questions relating to the welfare of our nation, are carefully studied and discussed.

Mill's Political Economy is used as a basis, but the students are required to read extracts from a number of standard authors, among whom are Adam Smith, Fawcett, Walker, Thompson, Bowen, Wayland, Perry, Laveleye, and Andrews.

*History of Civilization.*—The Seniors of the Scientific course are required to take this subject in the second term. Guizot's Lectures will be used as a guide. A considerable range of literature will be referred to, and essays on various topics required.

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## LANGUAGES.

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ENGLISH AND LATIN—W. W. ROBERTSON, PROFESSOR.

SPANISH—IDA M. JONES, INSTRUCTOR.

*English.*—In this department the students pursue a systematic course in the English Language and Literature.

Students of all courses take rhetoric in the first term of the Freshman year. Grammar and rhetoric each having been studied for an entire year in the Sub-Freshman Department, the work of this term will be *advanced* rhetoric.—Text-book, A. S. Hill's Rhetoric.

Rhetoric as an art is taught throughout the four years of the college course, all students being required to meet one hour each week. The study of text-books and rhetorical method ends with the first term of the Freshman year, but the essay work is carried on with English and American literature to the end of the Senior year.

English Literature is studied in all courses, in the first and second terms of the Junior year. American Literature is studied by the Agricultural students in the third term of the Junior year. In this study, the chief aim is to acquaint the student with the best literature and to cultivate in him a taste for it. One term, of the three devoted to this subject, will be given to the study of the history of literature, biographies, etc., the other two terms will be given to the study of the masterpieces of the language.

Swinton's Studies in Literature, Meiklejohn's English Language, Hale's Longer English Poems, Brooke's Primer, Hawthorne and Lemon's American Literature, and Phillip's English Literature are the text-books used.

All students in literature will be required to read standard works and will be examined on such reading.

In the Scientific course, literary reading is required as a practice in the Freshman year and in the Sophomore year. Opportunity is here given for a wide range of literary study and reading.

As far as possible this reading will be arranged so as to assist the student in other studies and researches. It will be made intensive rather than extensive. Critical and systematic, rather than superficial and indiscriminate, reading will be encouraged.

The library contains a great number of the best books, and additions are constantly being made thereto; so that no difficulty



as to books, will be experienced in carrying on this work.

*Rhetorical Exercises.*—All students will be required to appear in public each term with an oratorical exercise. This exercise will be considered equal to one-half in making term grade in English.

*Latin.*—The students in all Collegiate courses are required to take Latin or Spanish during the second and third terms of the Freshman year and throughout the Sophomore year. The Study of the language chosen may be continued during the first and second terms of the Junior year instead of analytical geometry and calculus.

In the first two terms of the course, the student is expected to acquire a thorough knowledge of declension, comparison, conjugation, and the elements of Latin syntax. This work is accompanied by exercises in translating Latin into English, and English into Latin. Harkness' First Year in Latin is the textbook used.

The work of the third term is a study of the first two books of Caesar's Gallic War. In the fourth term, Sallust's Catiline is read. The student is also led to see how the style of Sallust differs from that of Caesar. The translation of Cicero's orations against Catiline is the work of the fifth term. Roman History is also studied. Two books of the Aeneid of Virgil are read in the sixth term and a study of Roman mythology is made. In the seventh term, selections from the poems of Ovid are studied, and lectures are given on Roman manners and customs, and on Latin Metres. Grammar is carefully studied through the entire course.

*Spanish.*—As may be seen from the courses of study, Spanish is optional with Latin in all the courses in the second and third terms of the Freshman year, throughout the Sophomore year, and in two terms of the Junior year in the Scientific course.

In view of the fact that 30,000,000 people in the Western



hemisphere speak Spanish, and that it is the language of commerce of all the people south of the Rio Grande, it has been thought best to provide an opportunity for our students to acquire this language.

Situated, as this College is, near the border of the Republic of Mexico, with this tongue in common use among the majority of our people, the opportunity here afforded to acquire a working knowledge of this language, next to English the most useful for Americans, is certainly excellent, and should be improved by all who expect to enter upon any field of labor among the Spanish-speaking people. An additional reason for the study of Spanish is that the Mexican Government is about to establish a system of public schools in every part of the Republic, thus giving employment to a great many teachers, many of whom must come from the United States; but they must be good Spanish scholars. In the time allotted to this study, a fair knowledge of the language may be obtained.

The elements of the language are acquired by the study of De Torno's Combined Method with Worman's First and Second Books. Conversation and sight reading will be given twice a week with additional work in dictation.

The work in the Sophomore year will consist of translations of Cortena's "Amparo," oral and written translations of English selections of various styles, Spanish idioms, and the study of Knapp's Grammar.

In the Junior year the students will be required to do private reading in the course from Cervantes, Calderon, Moratin, and others. Translations of Moratin's comedy, *El sí de las Niñas*, selections from *Don Quixote* and *Gil Blas*, the writing of business letters, and the study of Spanish literature will be included in this year's work.

The following books of reference are accessible to the students: Sales' Grammar, Becker's Spanish Idioms, and Ticknor's History of Spanish Literature.

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**PSYCHOLOGY AND LOGIC.**

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C. T. JORDAN, PROFESSOR.

*Psychology.*—The principal facts and theories of the science of mind are carefully discussed and systematically compared. Especial attention is given to intellectual and moral philosophy. The topics of perception, understanding, memory, imagination, thought, feeling, and volition are analyzed, discussed, and explained. Theories of right and wrong as bearing upon correct principles of action are made the means of a clear understanding of the rights, privileges, and duties of the individual. The necessity of a thorough understanding of this subject in its relation to education is emphasized and enlarged upon. The student is made familiar with the great names in philosophy and with the cardinal doctrines of the different schools. Topics are assigned for individual work.

*Logic.*—The systematic study of logic, both inductive and deductive, is pursued as an aid to correct reasoning. Great prominence is given to methods for exact observation and experiment and correct principles of classification.

Instruction is by means of lectures and text-books.

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**ELOCUTION AND PHYSICAL CULTURE.**

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ELLEN F. GIBSON, INSTRUCTOR.

The ability to read well is no slight accomplishment, and can only be acquired by persevering effort, under the careful guidance of a skillful teacher. Systematic and thorough instruction will be given in reading, particular attention being paid to Articulation, Inflection and Emphasis.

Voice culture will include tone development and projection. As to the thoroughness of this training there can be no doubt, as students who have received one year's careful drill from the In-

structor, and who have natural talent for Elocution, are received as Seniors in the Boston School of Oratory.

The Physical Culture will include the Delsarte System of Physical culture and Gesture, as well as the Swedish System of Gymnastics and Free Gymnastics; and is designed to develop gracefulness of carriage, ease of appearance in public, freedom of movement, as well as greater bodily vigor, and better health.

Lessons in Physical Culture will be given daily, and Elocution lessons once every week throughout the course.

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### MUSIC.

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Superior arrangements will be made so that all students who desire to take either instrumental or vocal music can do so in a department, distinct from the College as to the payment of fees, but under such rules and regulations as the Faculty may make. Instrumental music will be confined to the piano and organ, and the teaching will be of very high order. Fees for music will be about what are usually paid in good schools. In no case will they be excessive.

## BUSINESS DEPARTMENT.

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In view of the facts that there are no schools in southern New Mexico that furnish thorough and complete commercial courses, that the demand for such instruction is great and increasing, and that such training is of the most useful and practical character the Board of Regents has established a Business Department in this College. In order that this department may not interfere with the regular college work, it is thought best to make it separate and distinct, to require a certain standard of admission, and to have definite courses of study. This department includes three courses, each complete in itself; namely, Course in Bookkeeping, Course in Stenography and Typewriting, and Course in Telegraphy.

Upon the completion of any of the courses a Certificate will be given.

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### REQUIREMENTS FOR ADMISSION.

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To begin the course in Bookkeeping or Telegraphy the student must be fifteen years of age, and must have completed arithmetic, grammar, geography, and U. S. history, and should be able to read and spell well. Students who have completed this work in the Sub-Freshman Department of this college, will be admitted without examination; also those students who can produce a certificate from the Principal of any commissioned high school or graded school in the Territory that the above named branches have been completed satisfactorily. All other students will be examined.

To begin the course in Stenography the student must be sixteen years of age, and must have completed all the work of the Sub-Freshman Department of this college. Students who have completed the work of the Sub-Freshman Department and graduates of any commissioned high school in the Territory, will be admitted to this course, without examination. All other students will be examined.

#### FEEs.

The following are the fees in the Business Department:

Entrance fee.....	\$5.00
Deposit for care of books, etc. ....	2.50

#### PURPOSE.

It is not the design of the Business Department to attempt to fit students for bookkeepers, stenographers, and telegraph operators in the shortest possible time; or to use all of the time of the student for purely technical instruction and practice. The demand at the present time is for well educated, thoroughly qualified bookkeepers, stenographers, and telegraph operators. It should be distinctly understood that this institution offers no inducements to those who are determined to enter upon any of these lines of work, without stopping to lay the foundation of a good general education. Experience will show that persons of limited education, if able to secure situations at all, invariably fall into the lowest class of workers, and are worth little to those who employ them; while the services of those who are carefully trained and well educated, are sought and liberally paid for.

Students will not be permitted to devote themselves exclusively to bookkeeping, stenography, or telegraphy, who cannot show to the satisfaction of the Faculty that they have completed, in a satisfactory manner, in some school of known thoroughness, the additional studies named in that Business Course they are pursuing. Nor will students be permitted to pursue more than one business course at a time, except by vote of the Faculty; and

such permission will only be granted to students whose age, maturity, and scholarship leave no doubt of their ability to do the work.

It is believed that these courses offer much for those who wish this kind of training. All students of the Business Department enjoy the same library privileges as the college students.

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### BOOKKEEPING.

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G. W. MILES, INSTRUCTOR.

It is not the aim to find in how short a time the student may be fitted for the duties of the counting room, but rather to train and equip him in such a manner that he may be able to meet the exacting demands and to perform the duties of accounting in modern commercial life. Thoroughness, practical and systematic work, and rigid inspection and examination of books, letters, and papers relating thereto will characterize the work. Under no circumstances will work be passed and credited unless it is strictly up to the standard required. Both double and single entry will be taught.

In theoretical bookkeeping the student is made familiar with the first principles of the science of bookkeeping. He is guided carefully until he can master the simpler forms of the daybook, journal, cashbook, and ledger, and can post and close a ledger correctly. Frequent exercises and class drills are given in journalizing and closing ledgers. Thus the student will gradually be required to master all forms and sets of books in the various lines of business, embracing single partnership, co-partnership, joint stock companies, corporations, etc.

In the Actual Business Practice will be put into practice that which has been learned in theory. Theory and Actual Business Practice will be so proportioned and combined as to produce the



best practical results. Lectures and exercises will be given throughout the course on opening and closing books, auditing books, and higher accounting.

Bookkeeping, for the second year Sub-Freshman class, Short-hand, and Telegraph students, will be taught in the first term. The work will comprise single and double entry bookkeeping; and as much work will be done as can be performed within the limited time allowed.

The work to be accomplished is to give the student a clear insight into theoretical bookkeeping so that he may be enabled to thoroughly understand its fundamental principles; and be entirely familiar with the simpler forms of the daybook or blotter, ournal, cashbook, ledger, statements, and the opening and closing of books. Much is offered in this work to those desirous of acquiring a limited knowledge of bookkeeping.

*Penmanship.*—The primary object of writing is, that it may be easily read; therefore legibility is the most essential feature in penmanship. Next in order to legibility is rapidity.

Business writting is taught in an interesting and systematic manner. The latest and most approved methods and systems will be used. No one branch of study in the Bookkeeping course is comparatively of greater importance than penmanship. The student is taught to develop and acquire a free and easy movement thereby enabling him to learn to write an easy, rapid, and legible hand-writing.

The advantages of a good hand-writing are many. It is one of the best recommendations in securing positions. An opportunity is afforded all Business students to be instructed in the art of penmanship in a first-class and systematic manner.

*Commercial Arithmetic.*—Mathematical accuracy, rapidity and efficiency in the counting-room are absolute requisites in our present business life. This subject will be taught throughout the entire Bookkeeping course. Those processes, commonly called "lightning calculations," will be taught and practiced

throughout the work. To compute correctly and rapidly is the aim of this work,

*Commercial Law.*—All young men and women should be familiar with commercial law. The work will be carried on by lectures and recitations. The purpose is to give a clear insight into the laws governing business transactions so that the student may be enabled to distinguish between legal and illegal contracts; may learn how to draw up various legal documents; may know the laws of negotiable paper, agency, partnership, corporations, joint-stock companies, real estate conveyances, interest guaranty, insurance, shipping, etc.

*Spelling.*—Especially attention is given to the subject of spelling. This branch is of the utmost importance to all and especially so to those contemplating commercial pursuits. To become proficient in spelling should be the aim of every one. Regular work will be carried on in this branch throughout the Bookkeeping course. Commercial terms will be one of the features.

*Grammar and Letter Writing.*—Careful instruction will be given throughout the entire year in grammar and letter writing to the students of this course and to those in the course in Telegraphy. The end to be attained is the easy and correct use of English, which is a most important element in education and one too frequently overlooked by those seeking commercial training.

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## STENOGRAPHY AND TYPEWRITING.

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F. E. LESTER, INSTRUCTOR.

The principal object of the course in Stenography and Typewriting is to thoroughly qualify the student to become a

practical shorthand and typewriting amanuensis, so that at the completion of the course he may be prepared to accept a position as such. Naturally, the larger portion of the time of the student pursuing this course is devoted to stenography and typewriting. In the first and second terms, three hours a day are given to stenography and one to typewriting; and in the third term, two hours a day to stenography, one to typewriting, and one to office work. The remaining studies pursued in this course are such as strengthen the student in those subjects which are more or less necessary to the competent stenographer, and together call for from two to three hours a day additional to the work in stenography and typewriting. They comprise commercial arithmetic and law, (required only if not previously completed in the Sub-Freshman Department); ancient, modern, and English history, (required only when commercial arithmetic and law are not taken); penmanship, spelling, and bookkeeping. An excellent feature of the course is the provision made for the study of Spanish, which may be taken in the second and third terms of the year upon the recommendation of the Instructor. The commercial relations between the States and Mexico, as well as the South American republics, are such that the demand is constantly increasing for competent stenographers who are able to correspond in the Spanish language; while those who can take dictation in that language can readily command a high salary.

A good English education is an absolute necessity to the student in shorthand; without it he can never succeed. It is the foundation upon which all his stenographic acquirements rest. Too much stress can not be laid upon this fact, for it is probable that in the great majority of cases, the all-too-common incompetent stenographer of to-day fails because of imperfect preparation for his work and a deficient general education. It is, therefore, required of all students entering the course that they shall have completed the work in the Sub-Freshman De-

partment, or its equivalent. Almost of equal importance, is the necessity for thoroughness in the work done, and this is made a strong feature throughout. Superficial work in shorthand is nothing less than a waste of time, and it will not be allowed.

It will be seen that this course is one calling for a good preparation and an unusual capacity for hard work, and the student who wishes to enter this course must be able to fill both of these requirements. The average student can not become a proficient amanuensis in less than the nine months required in the course.

*Shorthand.*—Much care has been taken in the selection of what is thought to be the best system of shorthand available, for the success of the shorthand student depends largely upon his faith in the system he studies. The superiority of Graham's Standard Phonography, which is the system taught, has been proved conclusively by recent investigations, which have revealed the fact that more than 50 per cent of the official court reporters in the United States are Graham writers. The textbook used is the new edition of Graham's Handbook, supplemented by other works.

The work of the year's course is divided into three parts. The first term is devoted to the elementary grade—a study of the principles of shorthand; the second term, to the intermediate grade—covering word-signs and drill in correct outlines; and the third term, to the advanced grade, in which the student confines himself largely to dictation in business correspondence, literary and general matter. Particular attention is given to correct business forms, commercial expression, and legal matter, and to careful training in the best outlines, by which alone a high rate of speed can be attained.

*Typewriting.*—The requirements of modern business demand only the expert typewriter operator, and the work of this course is such as to qualify the student to become such.

The four-finger method is taught, and a complete text-book—Torrey's "Practical Typewriting"—studied in connection therewith. The practical work includes fingering, touch, copying, letter writing, legal and commercial forms, spelling and punctuation, writing from dictation, mechanism and care of the machine, speed exercises, and transcription from shorthand notes. In the third term, one hour a day is devoted to office work, which includes thorough practice in letter-press copying, indexing and filing of names and letters, carbon and hektograph duplicating work, and mimeographing.

The department is well equipped with the best machines. Four New Model No. 6 Remington machines, one No. 2 Remington and one New Model No. 2 Smith Premier, comprise the equipment. Every student is given thorough drill on both the single and double keyboard machines.

There is little doubt of a student, graduating from this course, being able to secure a position. Several students completing the course in each of the past two years have secured good positions.

A certificate is given to students satisfactorily completing the course and passing an examination, the requirements of which are to be able to take from dictation ordinary business letters at the rate of 100 words per minute, and transcribe the same from notes correctly on the typewriter at a minimum speed of 25 words per minute.

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### TELEGRAPHY.

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J. P. STEWART, INSTRUCTOR.

The purpose of the course in Telegraphy is to fit the student who completes it, for the position of operator for any telegraph company, or station and express agent for any railroad. Good agents and operators are always in demand at remunerative salaries.



Three hours in the first and second terms, and two hours in the third term, are devoted daily to the study of telegraphy. Individual instruction is given. For the general education of the student, he is required to take commercial arithmetic, grammar, and penmanship in the first term; commercial arithmetic, grammar, and spelling in the second term; and commercial law, railroad bookkeeping, spelling, letter writing, and bookkeeping with the stenography students in the first term. An able student may, upon recommendation of his Instructor, be allowed to join the Freshman class in Spanish.

Bookkeeping, commercial arithmetic, commercial law, and penmanship are taught by the instructor in bookkeeping. Railroad bookkeeping is taught by the instructor in telegraphy. Students receive instruction in the making of reports, and the keeping of accounts such as are ordinarily required to be kept by station and express agents.

The students in telegraphy are arranged in groups according to their ability for speed in receiving messages. In this way all students may progress as rapidly as they are able.

In order to receive a certificate at the end of the year, the student must have a grade of at least 70 per cent in all branches of this course, and attain a minimum speed of 25 words per minute in sending and 20 words per minute in receiving messages.



## COURSES OF STUDY IN BUSINESS DEPARTMENT.

	BOOKKEEPING.	STENOGRAPHY AND TYPEWRITING.	TELEGRAPHY.
<i>First Term.</i>	Commercial Arithmetic . . . . . 5 Grammar . . . . . 5 Bookkeeping, . . . . . 5 Penmanship, . . . . . 5	Com. Arith. or Ancient His. . . 5 Rhetoric, . . . . . 5* Stenography, . . . . . 5 Penmanship, . . . . . 5 Bookkeeping, . . . . . 5	Commercial Arithmetic . . . . . 5 Grammar, . . . . . 5 Telegraphy, . . . . . 5 Penmanship, . . . . . 5 Bookkeeping, . . . . . 5
<i>Second Term.</i>	Commercial Arithmetic . . . . . 5 Grammar, . . . . . 5 Bookkeeping, . . . . . 5 Spelling, . . . . . 5	Com. Arith. or Med. & Mod. History, . . . . . 5 Spanish, . . . . . 5* Stenography, . . . . . 5 Spelling, . . . . . 5	Commercial Arithmetic, . . . . . 5 Grammar, . . . . . 5 Telegraphy, . . . . . 5 Spelling, . . . . . 5
<i>Third Term</i>	Commercial Law, . . . . . 5 Letter Writing, . . . . . 5 Bookkeeping, . . . . . 5 Spelling, . . . . . 5 Rapid Calculation . . . . . 5	Com. Law or English His. . . . 5 Spanish, . . . . . 5* Stenography, . . . . . 5 Office Work, . . . . . 5	Commercial Law . . . . . 5 Letter Writing, . . . . . 5 Telegraphy, . . . . . 5 Spelling, . . . . . 5 R. R. Bookkeeping, . . . . . 5
	PRACTICE.—Bookkeeping, each term . . . . . 5	PRACTICE.—Stenography, 1st term, . . . . 2½ Typewriting, each term, . . . . . 2½ Stenography, 2nd and 3rd terms, . . . . . 5	PRACTICE.—Telegraphy, each term . . . . . 5

NOTE.—The figure at the right of each subject denotes the number of recitation periods per week. Each recitation period is 50 min. long; each "practice" is one hour and 40 minutes long.

\*May be taken only on recommendation of Instructor.

## COLLEGE SOCIETY.

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The existing literary society of the college was organized October 25th, 1891, under the name of Alpha Chi. In 1892 this was changed to Columbian, and under this name the society has made steady and prosperous growth. Until about the middle of 1894-95 only male students were admitted as members, but since that time the young ladies have had equal membership privileges. The object of the society is to promote and encourage conscientious and practical literary work by discussions, papers, debates, and such other exercises as the committee on programme may prescribe. The requirements for admission to the society are that applicants must be students of good standing in the College. They must also pay an entrance fee of one dollar, and dues of fifty cents each succeeding term. Regular meetings are held each week.

### Officers:

E. B. Holt	- - - - -	President.
M. Gilmore	- - - - -	Vice President.
A. Casad	- - - - -	Rec. Secretary.
H. MacGregor	- - - - -	Cor. Secretary.
E. J. Coe	- - - - -	Treasurer.
E. F. Gibson	- - - - -	Librarian.
E. F. Gibson	- - - - -	Critic.
A. H. Peterson	- - - - -	Vice Critic.
D. Casad	- - - - -	Marshal.

The *New Mexico Collegian* is published and managed by the Columbian Literary Society, under the supervision of the Faculty. It was founded in February, 1893, and has been published regularly since that time, and has issued three excellent Commencement numbers. It is an eight to twelve page journal and contains frequent contributions from students, besides the

usual matter found in college publications. It is issued about the fifteenth of each month during the collegiate year, and has a good circulation throughout the Territory, and one which is constantly increasing.

The interest of students in the journal has grown considerably since it was founded, and it appears to be especially valued by those who leave college, serving as it does to keep them in close touch with the institution and with their college friend. The *Collegian* is now self-supporting, and has every prospect of being a successful journal. It will be enlarged and improved in the future as the support given it may warrant. All work in connection with its publication is entirely gratuitous. The subscription price is one dollar a year.

#### ATHLETIC ASSOCIATION.

The growth of the Athletic Association has more than kept pace with the College. The number of members was greatly increased over that of last year. So far, football and tennis have been made the principal college sports. The football team has lost but one game since the organization of the Association in 1893.

The Fourth Annual Field Day was held on May 1st. The programme consisted of the principal sports, which were very hotly contested. Gold medals were awarded to the winners of tennis, hundred yard dash, quarter mile race, and to the all-round athlete. The officers for 1895-6 are as follows:

A. M. Holt	- - - - -	President.
E. B. Holt	. - - - -	Rec. Secretary.
Chas. Mead	- - - - -	Treasurer.
D. V. Peacock	- - - - -	M'g'r Football.
E. B. Holt	- - - - -	M'g'r Field Day.
S. J. Jones	- - - - -	M'g'r Tennis.
H. Stanley	- - - - -	M'g'r Base ball.

Executive Board: A. M. Holt, E. B. Holt, Chas. Mead, D. G. Cravens, W. E. Holt, Ross Coe, D. V. Peacock and H. Stanley.

## GENERAL INFORMATION.

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The postoffice of the college is Mesilla Park, N. M. Mesilla Park is also the general freight and express office of the college.

Strangers will find it more convenient to stop at Las Cruces, and go temporarily to some hotel. They should then report to the president, who will assist them in finding a boarding place.

Students should be on hand the first day of the term. The necessity of this is too seldom realized. New students and those desiring re-examination should report on the day named for this work.

Students coming to the college over either the Atlantic & Pacific railroad or the Atchison, Topeka & Santa Fe railroad, and paying full fare, are returned for *one-third fare*. When buying tickets they must secure a receipt from the agent for the money paid. This receipt must be preserved or the reduced rate can not be obtained. This reduction in fare will be given only when the student returns at the end of the term

### TEXT-BOOKS.

Text-books are furnished by the college. They will either be sold to the student at cost, or they will be lent. Students are required to deposit \$2.50 in advance, to secure the proper care of college property and the prompt return of books borrowed. At the close of the year, or when the student withdraws, this deposit is returned unless damage has been done to

the books or other college property. When this is the case the damage is assessed against the student, and any balance remaining of his deposit returned.

This deposit may be increased with students who are notoriously careless. Students who are able should purchase their books. Many of them will be needed after leaving school and they can be made to form the nucleus of a library, which every student should be encouraged to collect.

#### STATIONERY.

As the college is distant about two miles from any store dealing in stationery, it has been found necessary for the accommodation of students, to carry at the college a small line of articles, such as paper, pencils, pens, etc., which are sold to students, for cash only, at a small profit.

#### FEEES.

Entrance fee, each year, for all students	-	-	-	-	-	\$ 5 00
Deposit fee	"	"	"	"	"	2 50
Students in Chemistry, deposit	-	-	:	-	-	5 00
Students using horse stalls, per term	-	-	-	-	-	25
Students not citizens of the U. S., per term	-	-	-	-	-	17 00

All fees must be paid in advance.

#### BOARDING AND OTHER EXPENSES.

We hear much said these times as to the cost of education. Many parents would gladly give their children a college education if they felt able to do so. The cost of travel in a large territory is great, but this is offset by free text-books and practically free tuition. The cost of clothing is something; but students should be taught to dress inexpensively, yet neatly. Clothes cost a certain amount whether in school or at home. The cost of board at home is something, though this is seldom

taken into consideration. Students need but little pocket money and the social demands on all students are light. If young people whose parents are unable to assist them, really want a college education, they can find a way to secure it, though it be but a term at a time. There is a greater demand for labor in New Mexico than in the east; most kinds are better paid; and any young person with sufficient energy and ambition, can, in time, work his way through college.

As yet the college can do nothing toward furnishing board and rooms. Students, so far, have secured board and lodging in private families near the college at from \$16 to \$20 per month. Some students have taken rooms and boarded themselves at greatly reduced cost. In the west, where many boys have learned to cook, this plan has great advantages for those of limited means. A year's boarding by this plan, including room, should not exceed \$100; and yet the student can have plenty of good, substantial food, and a comfortable room. Boarding clubs may be formed by students, and this is often a very good plan. With careful management this plan will reduce the cost of board and lodging to about \$150.00 a year. Washing will cost each student from \$1.00 to \$2.00 per month. Students who propose to furnish their own rooms should provide for this before leaving home. The freight on such articles as will be needed and can usually be spared from home will be light. It is not economical either to rent or to buy.

As may be seen, a student can get through the year by self boarding for about \$125.00; can board in a club and get through the year on from \$150.00 to \$175.00; and can board in a private family and expend from \$200.00 to \$250.00, according to his taste and means. It should be understood that all students are entitled to equal privileges in this institution; and will be accorded the same treatment, no matter what their condition in life. We believe that expenses here, (where free text-books, and



almost free tuition are given,) will not run higher than in other institutions of similar character. Within reach of the college building are houses for rent at reasonable prices. Many families have moved here and resided in these or on rented ranches in the vicinity in order to give their children an opportunity to attend college. Whenever parents can do this, it should be done, as perhaps no other plan is so satisfactory.

#### PAID LABOR.

There is a considerable amount of paid labor on the farm, in the shops, and in the laboratories, that can be performed by students; and the policy will be to give it to students rather than to others. Some students have been able to earn enough during the past year, to pay their expenses; but those doing so have had constant employment in some subordinate position. No student should come expecting constant employment, or without sufficient means to pay the greater part of his expenses. The college can not undertake to furnish work for all students who wish it, or need it, in anything like sufficient amount to pay expenses; and even if it could, the student's time is needed chiefly for study, recitation, and practice. Still many worthy and industrious students pay a considerable part of their expenses by labor, which is given to those who are most trustworthy and meritorious; and who are regular and punctual in attendance, and correct in deportment. This labor is paid for at the rate of from 10 cents to 20 cents per hour; but the Faculty reserves the right to limit the amount of work any student may do.

#### DISCIPLINE.

It should be impressed upon the youth of New Mexico that by the creation of the College of Agriculture and Mechanic Arts there has been provided for them the fullest and best opportunity to secure a practical education. Students who enjoy

the advantages here offered, should be made to realize that to forfeit these privileges on account of their misuse or abuse is a matter of the most serious concern to them.

Students who enter this school are expected to be honest, truthful, polite, attentive, and diligent. The authority exercised over them will be strict, yet at the same time reasonable and considerate. It should be understood that the college is for those students who are capable of a fair degree of self-control, and who come here to fit themselves for useful and honorable places in life. If, after a fair trial, the influence of any student is found to be detrimental to scholarship, morals, or good order, dismissal will follow. The following are strictly forbidden: 1st, The indulgence in the use of intoxicating liquors and the frequenting of questionable resorts. 2d, The use of tobacco in any form in or about the college buildings. 3d, All indecent behavior and profane language.

#### POLITICS.

It is the aim of the college to cultivate true patriotism and respect for the laws of the Territory and Nation and for all constituted authority. Students will be taught their rights as citizens, and their duties as such; and there, teaching of this character, will end.

#### RELIGION.

All students will be trained in the principles of morality, and to respect the teachings of religion; but no sectarian teachings will be tolerated in the college. Students will be encouraged to attend the various churches and Sunday schools. Entire freedom of choice is given the students in selecting the church they will attend. Services are held at the following churches every Sunday: Catholic, Presbyterian, Methodist, and Episcopal. At the Presbyterian church are held meetings of the Young People's

Society of Christian Endeavor. With the Methodist church is connected the Epworth League. Many of the students attend the weekly meetings of these organizations and receive great benefit.

#### HOW TO WITHDRAW FROM THE COLLEGE.

If students have occasion to withdraw from the college, they should call on the President and make their arrangements with him. He will see that their accounts are properly adjusted, proper records made of their work, whatever money may be due from their credit deposit refunded, and will so arrange their records that their manner of withdrawal shall not stand in the way of an honorable discharge.

*Students who leave without having satisfactorily adjusted all these matters will not be entitled to an honorable dismissal*

#### EXAMINATIONS AND STANDING.

Examinations are held at the end of each term. Students must make a grade of 70 per cent in each subject. Failing to make this grade, students must report for re-examination on the day specified; failing then, they must take the subject with a subsequent class.

#### ATTENDANCE.

Students are expected to be punctual and regular in attendance. They will not be permitted to leave the college in term time without a leave of absence granted by the President or Faculty. Temporary leave of absence may be granted by the President or in his absence, by the Vice President.

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### THE COLLEGE OF AGRICULTURE AND MECHANIC ARTS AS A TEACHERS' TRAINING SCHOOL.

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The New Mexico College of Agriculture and Mechanic Arts does not desire to interfere in any way with those institutions of the Territory giving special attention to Normal work; but

in as-much as the Legislature has recently provided that the diplomas issued by this College to its graduates shall be accepted as first-grade teachers' certificates in any of the counties of the Territory, this College will offer unusual facilities for properly training teachers for the responsibilities of their profession.

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## MATERIAL EQUIPMENT.

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### COLLEGE BUILDING.

The College Building is a fine brick structure of two stories and basement. It is trimmed with stone, and has a very heavy stone foundation. It is well built, nicely finished, and cost about \$25,000. It contains thirteen rooms all of which are furnished and in constant use. The building is heated throughout by hot air furnaces, and is well supplied with gas and water. In the basement are the chemical and entomological laboratories, each fitted up with the best appliances. Here are also the Recitation rooms for bookkeeping and for telegraphy. On the first floor are the President's office, the mathematical department, the botanical and geological department, the library, and the recitation room for stenography and typewriting. For lack of space, the library room is utilized for a study room for college students. On the second floor are the department of history and political science, the department of languages, and the Sub-Freshman department of the college. On this floor is a hall capable of seating quite a large audience. It is in frequent use for Class public exercises, and other entertainments. On account of the lack of room, this hall is divided by movable partitions into three class rooms for the use of the Sub Freshman department.

The Library and Reading Room is commodious, and furnished in a tasteful manner. The library contains more than 2,800 volumes, to which additions are constantly being made. Each

department is supplied with a technical library for daily use in the class room. The plan of Department libraries has been adopted as best calculated to increase the usefulness of the library by making it more accessible to students while engaged in special lines of work. The Reference library is quite extensive, containing encyclopedias, gazetteers, dictionaries, etc. The general library includes standard books on history, biography, travels, literature, art, science, and some of the best fiction.

In connection with the Library is a Reading Room, in which are found the following periodicals:—

Agricultural Science, American Agriculturist, American Journal of Mathematics, American Chemical Journal, American Machinist, American Naturalist, Analyst, Arena, Astrophysical Journal, Botanical Gazette, Bulletin Torrey Botanical Club, Business (Accountant's Ed.), Canadian Entomologist, Century, Chemical News, Cosmopolitan, Current History, Educational Review, Engineering (London), Engineering News, Engineering Magazine, Engineering—Mechanics, Entomological News, Erythra, Field and Farm (Denver), Forum, Frank Leslie's Illustrated Weekly, Gardening, Garden and Forest, Harper's Monthly Magazine, Harper's Weekly, Harper's Round Table, Irrigation Age, Journal American Chemical Society, Journal London Chemical Society, Journal Association Engineering Societies, Journal of Education, Journal New York Entomological Society, Journal of the Telegraph, Ladies' Home Journal (two copies), North American Review, Pacific Rural Press, Phonographic World, Popular Science Monthly, Popular Astronomy, Political Science Quarterly, Public School Journal, Psyche, Public Opinion, Review of Reviews, Rural New Yorker, Scientific American, Scientific American Supplement, Science, Scribner's Magazine, Stenographer, Transactions American Entomological Society, Werner's Voice Magazine, Youth's Companion (two copies).





A CORNER OF THE LIBRARY.





The following Newspapers are furnished gratuitously by the publishers:—

- The Mew Mexico Collegian (College Paper).
- The Las Cruces Independent Democrat.
- The Las Cruces Rio Grande Republican.
- The Socorro Chieftain.
- The Eddy Current.
- The Roswell Register.
- The Roswell Record.
- The Farmington Times.
- The New York Weekly Tribune.
- The Baltimore Weekly Sun.

Students have access also to the following periodicals which are kindly furnished by the publishers to the Experiment Station Library in exchange for the Station Bulletins:—

- Agriculturist, Minneapolis, Minn.
- Agricultural Epitomist, Indianapolis, Ind.
- American Creamery, Chicago, Ill.
- American Cultivator, Boston, Mass.
- American Fertilizer, Philadelphia, Pa.
- American Grange Bulletin, Cincinnati, Ohio.
- American Horticulturist, Wichita, Kan.
- American Poultry Journal.
- American Sheep Breeder and Wool Grower, Chicago, Ill.
- American Swineherd, Chicago, Ill.
- Breeder's Gazette, Chicago, Ill.
- California Cultivator and Poultry Keeper, Los Angeles, California.
- Church and Farm, Salt Lake City, Utah.
- Country Sport, London, Eng.
- Creamery Journal, Waterloo, Iowa.
- Cultivator, Omaha, Neb.
- Dairy World, Chicago, Ill.

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Dakota Farmer, Aberdeen, S. D.  
Elgin Dairy Report, Elgin, Ill.  
Farmer's Call, Quincy, Ill.  
Farm, Field and Fireside, Chicago, Ill.  
Farm and Fireside, Springfield, O.  
Farmer's Guide, Huntington, Ind.  
Farmer and Breeder, Springfield, Ill.  
Farm and Home, Chicago, Ill.  
Farmer's Home, Dayton, Ohio.  
Farm Journal, Philadelphia, Pa.  
Farmer's Magazine, Springfield, Ill.  
Farm News, Springfield, Ohio.  
Farm and Orchard, Las Cruces, N. M.  
Farm Poultry, Boston, Mass.  
Farmer's Review, Chicago, Ill.  
Farm Reporter, Charleston, W. Va.  
Farm, Stock and Home, Minneapolis, Minn.  
Farming, Toronto, Canada.  
Grange Visitor, Lansing, Mich.  
Hoard's Dairyman, Fort Atkinson, Wis.  
Holstein Friesian Register, Brattleboro, Vt.  
Horticultural Gleaner, Austin, Texas.  
Homestead, Des Moines, Iowa.  
Industrial American, Lexington, Ky.  
Journal of Agriculture, St. Louis, Mo.  
Jersey Bulletin, Indianapolis, Ind.  
Kansas Farmer, Topeka, Kas.  
Louisiana Planter, New Orleans, La.  
Market Garden, Minneapolis, Minn.  
Midland Poultry Journal, Kansas City, Mo.  
Mirror and Farmer, Manchester, N. H.  
Montana Fruit Grower, Missoula, Mont.  
Nebraska Farmer, Lincoln, Neb.





NEW ENGINEERING BUILDING.

New England Florist.  
 Northwestern Agriculturist, Minneapolis, Minn.  
 Ohio Farmer, Cleveland, Ohio.  
 Oregon Agriculturist, Portland, Oregon.  
 Poultry Monthly, Albany, N. Y.  
 Practical Farmer, Philadelphia, Pa.  
 Prairie Farmer, Chicago, Ill.  
 Progressive South, Richmond, Va.  
 Public Ledger, Philadelphia, Pa.  
 Rural Life, Waterloo, Va.  
 Southern Cultivator, Atlanta, Ga.  
 Southern Farmer, New Orleans, La.  
 Southern States, Baltimore, Md.  
 Stock Grower and Farmer, Las Vegas, N. M.  
 Stockman and Farmer, Helena, Mont.  
 Successful Farmer, Sioux Falls, S. D.  
 Sugar Beet, Philadelphia, Pa.  
 Texas Farm and Ranch, Dallas, Texas.  
 Wallace's Farmer, Des Moines, Iowa.  
 Western Agriculturist and Live Stock Journal,  
     Quincy, Ill.  
 Wisconsin Agriculturist, Racine, Wis.

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#### ENGINEERING BUILDINGS.

These buildings, two in number, are located south of the main College Building. They comprise, besides two large recitation rooms and hall, commodious rooms for wood work, machine work, foundry, blacksmithing, and a 40 horse power steam plant. These buildings are well equipped for Engineering work.



## OTHER BUILDINGS.

Back of the college building are the feed rooms and horse sheds. These are for the accommodation of the horses of the students and professors. The charge for their use is 25 cents a term, which is sufficient to keep them cleaned and in order.

Below the college building is a pump house with engine and all other necessary machinery for pumping water from a system of six driven wells for the irrigation of the Campus, which is much higher than the ditches which irrigate the farm land. This plant cost about \$2,500.

An adobe Farm Building erected at a cost of about \$2,000 is located near the center of the farm. It consists of a residence for the assistant in agriculture and horticulture, and a large room for storing seeds, supplies, etc. The Greenhouse, and the sheds for the storing of farm implements and machinery, are located near the farm building.

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**GENERAL REQUEST.**

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The College of Agriculture and Mechanic Arts offers a great deal to the young people of New Mexico. Every effort will be made to acquaint the people of the whole Territory with its purpose and work. Its courses of study are now equal to those of similar colleges in almost any of the older states. Students can now get a practical education here in any line they may desire. New schools usually make greater efforts than the older ones; and the energy put forth and the instruction given are often superior. There are a great number of students sent from various parts of the Territory each year to eastern colleges. We ask parents who do this, to investigate this college; and we believe if they will do so, it will get a share of their patronage, and that our people will manifest, in an increasing degree, their appreciation of the bounty of the United States and of the Territory here dispensed. We know it is better fitted to do good work than some of the eastern schools patronized by our people.

## COLLEGE STUDENTS.

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### SENIOR CLASS.

Gilmore, Mae,	-	-	-	Ft. Stanton.
Holt, Alfred Mos,	-	-	-	Mesilla.
Peterson, Albert Henry,	-	-	-	Mesilla Park.
Rhodes, Clarence Edgar,	-	-	-	Mesilla Park.

### JUNIOR CLASS.

Holt, Elgin Bryce,	-	-	-	Mesilla.
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### SOPHOMORE CLASS.

Casey, Edwin Eugene,	-	-	-	Las Cruces.
Coe, Edward James,*	-	-	-	Ft. Stanton.
Cravens, Du Val Garland,	-	-	-	Ft. Smith, Ark.
Mead, Charles Edward,*	-	-	-	Victoria.
Mead, Iva Rebekah,*	-	-	-	Victoria.
Peacock, Frederica Bush,*	-	-	-	Victoria.
Stanley, Isaac Henry,	-	-	-	Pinos Altos.
Sweet, Lottie,*	-	-	-	Mesilla Park.
Williams, George Morgan,	-	-	-	Las Cruces.

### FRESHMAN CLASS.

Broyles, Richard Franklin,*	-	-	-	Las Cruces.
Casad, Darwin,	-	-	-	Mesilla.
Clino, James,	-	-	-	Pinos Altos.
Coe, Albert Newton,*	-	-	-	Farmington.
Coleman, Bertie,*	-	-	-	Las Cruces.
Ford, Pinkie,*	-	-	-	Las Cruces.
Gilmore, Ula,*	-	-	-	Ft. Stanton.
Harrison, Harry Young,	-	-	-	Mesilla Park.
Holt, Walter Edwin,	-	-	-	Mesilla.
Jacoby, Clara,	-	-	-	Hatch.
Peake, Dee,*	-	-	-	Mesilla Park.
Sutherland, Paul,	-	-	-	La Luz.

\*Conditioned.

## SPECIAL STUDENTS.

Chatelin, Margaret,	-	-	-	-	Albuquerque.
Endicott, Georgina,	-	-	-	-	Lake Valley.
Garcia, Fabian, B. S.,	-	-	-	-	Mesilla Park.
Mills, Charles,	-	-	-	-	Danville, Ill.
Owen, Florence May,	-	-	-	-	Mesilla Park.
Wickham, Anna,	-	-	-	-	Socorro.
Wickham, Elizabeth,	-	-	-	-	Socorro.

## \* PREPARATORY STUDENTS.

## THIRD YEAR CLASS.

Bailey, Rolla,	-	-	-	-	Anthony.
Bryan, Joseph,	-	-	-	-	Las Cruces
Coe, Ross E.,	-	-	-	-	Ft. Stanton.
Coleman, Elizabeth,	-	-	-	-	Las Cruces.
Davis, Vivette,	-	-	-	-	El Paso, Texas
French, Fannie,	-	-	-	-	Las Cruces.
Goodin, Monte Hickman,	-	-	-	-	Las Cruces.
Jacoby, Lydia,	-	-	-	-	Hatch.
Jacoby, William,	-	-	-	-	Hatch.
MacGregor, Marie Justina	-	-	-	-	Mesilla Park.
Newberry, Maude,	-	-	-	-	Mesilla Park.
Newberry, Minnie Wilson,	-	-	-	-	Mesilla Park.
Owen, James Edward,	-	-	-	-	Mesilla Park.
Race, Edgar Albert,	-	-	-	-	El Paso, Texas.
Rhodes, Helen Mabel,	-	-	-	-	Mesilla Park.
Stephens, Bert,	-	-	-	-	Pinos Altos.
Stephens, Frank,	-	-	-	-	Pinos Altos.
Sweet, Almer,	-	-	-	-	Mesilla Park.
Thompson, Cayetano,	-	-	-	-	Georgetown.
Wickham, Mary C.,	-	-	-	-	Socorro.

\*Changed to Sub-Freshman.

SECOND YEAR CLASS.

Alvarez, Lauro Canuto,	-	-	-	-	Anthony.
Bailey, Blanche,	-	-	-	-	Anthony.
Casey, Leo Garfield,	-	-	-	-	Las Cruces.
Cuniffe, Clara,	-	-	-	-	Las Cruces.
Ford, Fannie,	-	-	-	-	Las Cruces.
Gilmore, Matt,	-	-	-	-	Ft. Stanton.
Jerrell, Henry,	-	-	-	-	Las Cruces.
Kezer, Roy Vernon,	-	-	-	-	Las Cruces.
Kezer, Avery Marion,	-	-	-	-	Las Cruces.
Lapoint, Lawrence,	-	-	-	-	Las Cruces.
Lowe, Lawson David,	-	-	-	-	Las Cruces.
MacGregor, James Stanislaus,	-	-	-	-	Mesilla Park.
May, Ormeda,	-	-	-	-	Las Cruces.
McGinn, Kate,	-	-	-	-	Gibson.
Moreno, Eugenio Enrique,	-	-	-	-	Telles.
Newberry, Nora,	-	-	-	-	Mesilla Park.
Peake, Charlotte Mae,	-	-	-	-	Mesilla Park.
Pierce, Harry,	-	-	-	-	Farmington.
Potts, Rex,	-	-	-	-	Las Cruces.
Rudisill, Leona,	-	-	-	-	Las Cruces.
Sanders, William Perry,	-	-	-	-	Magdalena.
Sanchez, Alfred,	-	-	-	-	Mesilla.

SPECIAL CLASS.

Buquor, Joseph Oscar,	-	-	-	-	Las Cruces.
Gamboa, George,	-	-	-	-	Mesilla.
Garcia, Belzan,	-	-	-	-	Doña Ana.
Luchini, Benjamin,	-	-	-	-	Doña Ana.
Reush, Harry,	-	-	-	-	Earlham.
Reush, Guy,	-	-	-	-	Earlham.
York, William Walter,	-	-	-	-	Alma.

# **BUSINESS STUDENTS.**

## **BOOKKEEPING CLASS.**

Cain, Fred W.,	-	-	-	Hillsboro.
Coleman, James H.,*	-	-	-	Las Cruces.
Dougher, Joseph M.,	-	-	-	El Paso, Texas.
Hall, Cornelia Belle,*	-	-	-	Silver City.
Herron, Claude R.,*	-	-	-	Las Cruces.
Hittson, William,	-	-	-	Magdalena.
Hood, Clark A.,	-	-	-	Nocona, Texas.
Jones, Samuel J.,	-	-	-	Mesilla.
Jones, Alice,	-	-	-	Silver City.
Julian, Charles B.,	-	-	-	El Paso, Texas.
Kezer, Lucy A.,*	-	-	-	Earlham.
Kezer, Henry J.,†	-	-	-	Las Cruces.
Kinsey, William D.,*	-	-	-	Hillsboro.
May, Mary L.,	-	-	-	Las Cruces.
Newberry, Samuel H.,	-	-	-	Las Cruces.
Sanford, John D.,	-	-	-	La Luz.
Southlee, Thomas,	-	-	-	Las Cruces.

## **STENOGRAPHY AND TYPEWRITING CLASS.**

Bryan, John Bowman,	-	-	Las Cruces.
Buchoz, Edward Spencer,	-	-	El Paso, Texas.
Casad, Alice Byron,*	-	-	Mesilla.
French, Floy Edna,	-	-	Las Cruces.
Hinton, Authur R.,	-	-	Bay Ridge, N.Y.
Kinsey, William D.,	-	-	Hillsboro.
MacGregor, Helen Mar,*	-	-	Mesilla Park.
Phinney, Charles B.,	-	-	Paradise, Nova Scotia.
Woodworth, John Morgan,	-	-	Las Cruces.

\*Completed course and received Certificate.

†Deceased.

TELEGRAPH CLASS.

Amador, Juan E.,	-	-	-	Las Cruces.
Ames, David C.,	-	-	-	Las Cruces.
Bull, Thomas R.,	-	-	-	Mesilla.
French, Ralph E.,	-	-	-	Las Cruces.
Griggs, Gustave D.,	-	-	-	Mesilla.
Lewis, Arthur B.,	-	-	-	East Las Vegas.
Mead, William C.,*	-	-	-	Victoria.
Peacock, Daura V.,	-	-	-	Victoria.
Peacock, Viola A.,	-	-	-	Victoria.
Turner, Avery S.,	-	-	-	Maywood, Mo.

\*Completed course and received Certificate.

SUMMARY.

Seniors, . . . . .	4.
Juniors, . . . . .	1.
Sophomores, . . . . .	9.
Freshmen, . . . . .	12.
Special, . . . . .	7.
Stenography and Typewriting, ..	9.
Bookkeeping, . . . . .	17.
Telegraphy, . . . . .	10.
Preparatory, . . . . .	49.
	<hr/>
	118.
Names repeated. . . . .	1.
	<hr/>
Total number of students. . . .	117.



# THE AGRICULTURAL EXPERIMENT STATION.

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BOARD OF CONTROL:

## BOARD OF REGENTS OF THE COLLEGE.

---

THOMAS J. BULL, Mesilla, President.

DEMETRIO CHAVEZ, Mesilla, Secretary and Treasurer.

JOHN D. W. VEEDER, Las Vegas.

ROBERT BLACK, Silver City.

G. A. RICHARDSON, Roswell.

WM. T. THORNTON, Governor, Santa Fe, N. M., *Ex-Officio*.

AMADO CHAVES, Superintendent of Public Instruction,  
Santa Fe, N. M., *Ex-Officio*.

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## STATION STAFF, 1896-'97.

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CORNELIUS T. JORDAN, A. M., Director.

ARTHUR GOSS, M. S., A. C., Chemist.

JOHN D. TINSLEY, Biologist.

T. D. A. COCKERELL, *Honorary* Entomologist.

GEORGE VESTAL, Agriculturist and Horticulturist.

R. FRED HARE, M. S., Assistant Chemist.

FABIAN GARCIA, B. S., Meteorologist and Assistant to Agriculturist and Horticulturist.

FRANK E. LESTER, Clerk and Stenographer.

HARVEY H. GRIFFIN, B. S., Superintendent of San Juan Branch Experiment Station, Aztec, N. M.

F. O. KIHLEBERG, Superintendent of Las Vegas Branch Experiment Station, Las Vegas, N. M.



VIEW OF EXPERIMENTAL FARM FROM THE MAIN BUILDING.



## COLLEGE EXPERIMENT STATION.

By the Congressional Act of 1887, the Hatch Act, (see page 10,) a "Department" of Agricultural Colleges was endowed, having for its purpose the performing of experiments of value to Agriculture and Horticulture and the diffusing of valuable information among the people. The Territorial Act of Feb. 28, 1889, which established the New Mexico College of Agriculture and Mechanic Arts, established also an Experiment Station in connection with the college. This department is in successful operation.

The College Farm, which was donated to the Territory by the citizens of Dona Ana County, contains about 250 acres. Nearly 100 acres of this farm is good river bottom land, supplied with water from the Las Cruces Community ditch which crosses it. This tract is divided into eight plats, which are subdivided into plats of various sizes, from a square rod to an acre.

Plats I. and VIII. are in the old river bed, and are used at present for growing alfalfa for the farm stock.

Plat II. is used for experiments in grasses, clovers, kaffir corn, and other non saccharine sorghums.

Plat III. contains the orchards and vineyard. The orchard contains 150 varieties of peaches, 90 of apples, 60 of pears, 50 of plums and prunes, 16 of cherries, 20 of apricots, 4 of nectarines, 5 of quinces, 6 of figs, etc. There are four trees of each variety, most of which are of bearing age. The vineyard contains 100 varieties of American and foreign grapes.

Plat IV. is used for growing oats for the farm team.

Plat V. contains ten acres, and is used by the students for athletic grounds.

Plat VI. contains thirteen one acre plats of alfalfa for experimental purposes, one acre of cañaigre, a number of plats of oats, and a hog pasture. The farm buildings—including the new greenhouse, are located on this plat.

Plat VII. is devoted to experiments in corn, wheat, oats, barley, rye, millets, peas, peppers, carrots, sugar beets, sweet potatoes, grasses, new forage plants, clovers, etc.

The remaining 150 acres is mesa land. Thirty acres were

cleared for experimentation and for the location of the College Buildings. A part of this tract is irrigated with water raised from wells by steam power.

A great number of valuable horticultural and agricultural experiments are in process of testing, and more are being constantly begun. During a large portion of the year, students have opportunities to labor on this farm, thus enabling them to defray a considerable portion of their expenses. Besides this, they are under the direct guidance and instruction of an educated horticulturist and agriculturist of large experience. This alone is a valuable consideration.

A meteorological station is maintained on the College Farm where a record of the daily observations of the weather is kept. The following standard instruments are in use: wind vane, rain gauge, self-registering anemometer, mercurial barometer, dry and wet bulb thermometers, maximum and minimum thermometers, soil thermometers, etc.

A large amount of Entomological work has been done which promises results of great practical value to the horticulturist. The design of this department is to inform farmers and fruit-growers of the injurious insects found here, and to suggest the best methods of exterminating them. The value of such work is readily seen, and the method of disseminating information is by bulletins issued at intervals.

In the Chemical department much work has been done on irrigating waters, native forage plants, and various other subjects of special interest to the farmers of the Territory. Besides being of the highest importance to the Agricultural classes, this work affords the students an opportunity of seeing chemical processes practically applied. Numerous assays of ores and determinations of minerals are also made in this department, thus affording the students object lessons in this kind of work.

The Botanical department is devoting its time and attention to the collection of an herbarium and to a thorough understanding of the local flora. Much work has been done in this line already, as well as a considerable study of our native weeds. The fungus diseases of plants, particularly those of the vine and orchard trees, have received some attention and will hereafter form the basis



STATION CHEMICAL LABORATORY.





of one term's work for students of the Agricultural Course. Students are required to do some collecting, and the specimens already in the herbarium are extensively used in class work, so that students are in close contact with the regular work of the department.

Nineteen Bulletins have been issued on topics of interest to farmers, and more are in preparation. Those already issued are the following:—

- No. 1. April, 1890—General Information.
- No. 2. Oct., 1890—Outline of Plans of Experimentation.
- No. 3. June, 1891—Preliminary Account of Some Insects Injurious to Fruit.—C. H. Tyler Townsend.
- No. 4. March, 1892—Fruit Trees, Forest and Shade Trees, Nut-Bearing Trees, and Vegetables.—A. E. Blount.
- No. 5. March, 1892—Notices of Importance Concerning Fruit Insects.—C. H. Tyler Townsend.
- No. 6. March, 1892—Cereals, Forage Plants, Grasses, Clovers, Textile Plants, and Sorghums.—A. E. Blount.
- No. 7. June, 1892—Scale Insects in New Mexico.—C. H. Tyler Townsend.
- No. 8. Nov., 1892—Wheat, Oats, Barley, Rye, Sugar Beets, Sorghum, Cañaigre, etc.—A. E. Blount.
- No. 9. May, 1893—Insecticides and their Appliances.—C. H. Tyler Townsend.
- No. 10. Sept., 1893—Insects of 1893.—T. D. A. Cockerell.
- No. 11. Oct., 1893—Notes on Cañaigre and Meteorological Data.—A. E. Blount and Harvey H. Griffin.
- No. 12. Nov., 1893—The Value of Rio Grande Water for the Purpose of Irrigation.—Arthur Goss.
- No. 13. New Mexico Weeds, No. 1.—E. O. Wooton.
- No. 14. Cañaigre.—A. E. Blount.
- No. 15. Entomological Observations in 1894. Life Zones in New Mexico. Entomological Diary at Santa Fe.—T. D. A. Cockerell.
- No. 16. Sept., 1895—The Russian Thistle.—E. O. Wooton.
- No. 17. Dec., 1895—Principles of Stock Feeding and Some New Mexico Feeding Stuff.—Arthur Goss.

No. 18. March, 1896—Some New Mexico Forage Plants.—E. O. Wooton.

No. 19. April, 1896—Report of the Entomologist, (Part I).—T. D. A. Cockerell.

Upon application Bulletins will be sent *free* to any address in the Territory.

#### BRANCH EXPERIMENT STATIONS.

In February, 1893, the Thirtieth Legislative Assembly passed Acts creating Branch Experiment Stations.

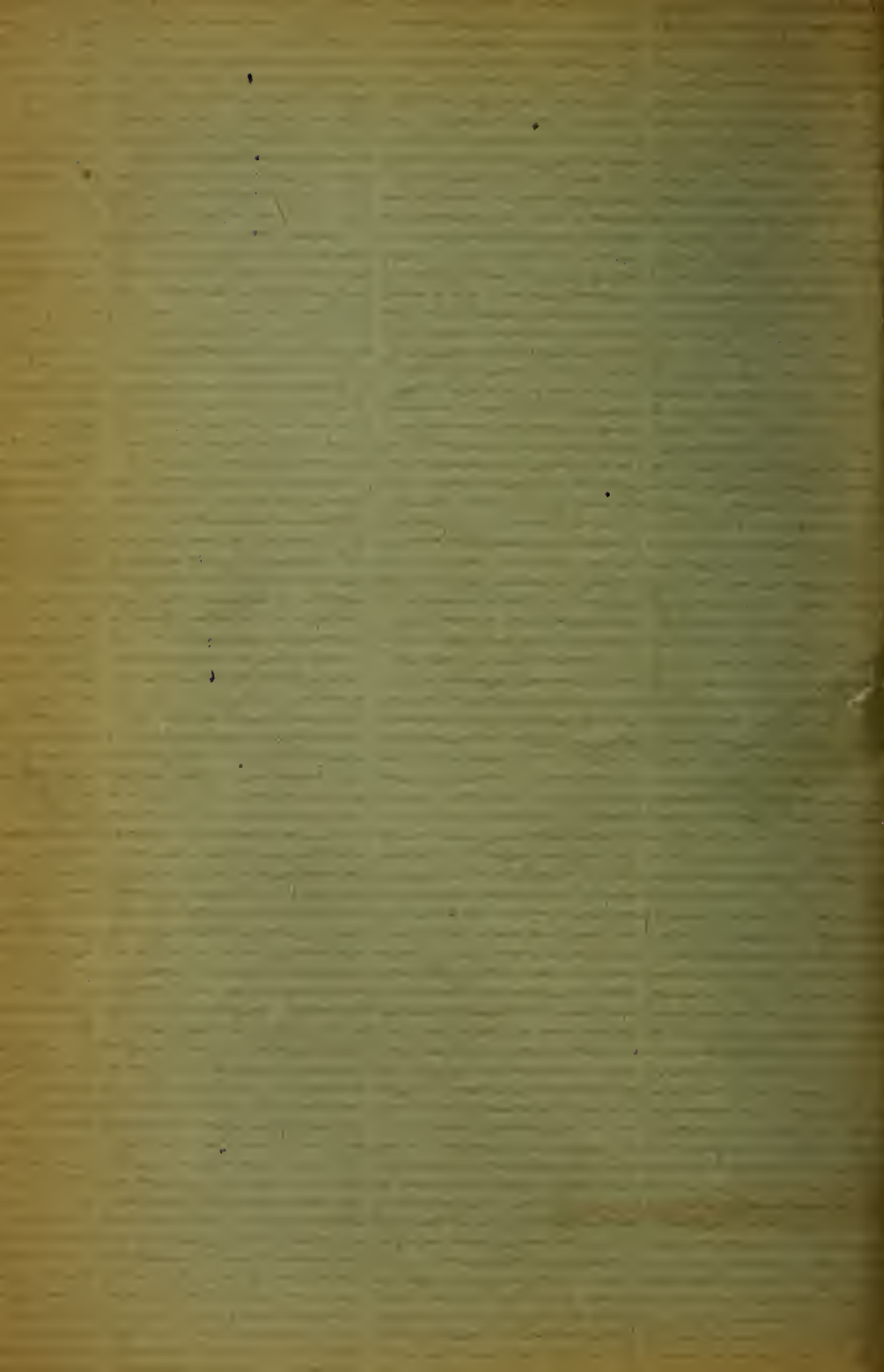
The *first* is located near Aztec on a tract of 120 acres of irrigated land, donated to the Territory by the citizens of San Juan County.

The *second* is located near Las Vegas on a tract of 100 acres of land, which may be irrigated, and which was donated to the Territory by the citizens of San Miguel County.

The *third* will be located near Roswell on a tract of 100 acres of irrigated land, which has recently been donated to the Territory by the citizens of Eddy county.

In each of the several Acts creating these Branch Experiment Stations is a section authorizing the Regents to apply to the support and maintenance of each station such a part of the funds received from the United States for Agricultural Experiment Stations as can be so applied *in justice to each of the other stations, and to the Agricultural College*. There is no doubt that more Branch Stations have already been created by the Legislative Assembly than can be provided for out of the Station fund of the College. It should be understood that the Branch Stations already established can never be very beneficial to the sections in which they are located, unless the Territory is willing to assume the burden of their support. The analytical work in chemistry, botany, and entomology will always be done at the College Experiment Station, and the results published from here. If any further demands are made on the Experiment Station fund the character of the work done here will necessarily deteriorate. The Agricultural Colleges in the old states without exception have abolished all their Branch Experiment Stations because of the great expense and small returns.





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LIBRARY  
OF THE  
UNIVERSITY of ILLINOIS.

SEVENTH  
ANNUAL....  
CATALOGUE

OF THE \_\_\_\_\_

New Mexico

College of Agriculture

AND

Mechanic Arts.

\_\_\_\_\_

Mesilla Park.

\_\_\_\_\_

1896-'97.









MAIN COLLEGE BUILDING.

LIBRARY  
OF THE  
UNIVERSITY of ILLINOIS.

NEW MEXICO

COLLEGE OF AGRICULTURE

—AND—

MECHANIC ARTS.

 MESILLA PARK. 

CATALOGUE FOR 1896-97

And Announcements for 1897-98.

## **Calendar for 1897-8.**

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Re-examinations and examinations of candidates for admission, Tuesday, September 7, 1897.

First term begins Wednesday, September 8, 1897.

First term ends Friday, November 26, 1897.

Second term begins Monday, November 29, 1897.

Holiday vacation begins Friday, December 24, 1897, and ends Sunday, January 9, 1898.

Second term ends Friday, March 4, 1898.

Third term begins Monday, March 7, 1898.

Third term ends Wednesday, May 25, 1898.





## Board of Regents.

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MIGUEL A. OTERO, Governor, *Ex-Officio*.

PLACIDO SANDOVAL, Supt. Public Instruction, *Ex-Officio*.

ROBERT BLACK, Silver City, term expires 1897.

THOMAS J. BULL, Mesilla, term expires 1898.

DEMETRIO CHAVEZ, Mesilla, term expires 1899.

G. A. RICHARDSON, Roswell, term expires 1900.

A. A. JONES, Las Vegas, term expires 1901.

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### Officers of the Board.

THOMAS J. BULL, President.

DEMETRIO CHAVES, Secretary and Treasurer.

## FACULTY.

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[Arranged in the order of appointment, except the President.]

CORNELIUS T. JORDAN, A. M.,  
*President and Professor of Logic.*

JOHN P. OWEN,  
*Vice President and Professor of History and Political Science.*

CLARENCE T. HAGERTY, M. S.,  
*Professor of Mathematics.*

ARTHUR GOSS, M. S., A. C.,  
*Professor of Chemistry.*

GEORGE VESTAL,  
*Professor of Agriculture and Horticulture.*

FRANK W. BRADY, M. E.,  
*Professor of Mechanical and Civil Engineering.*

WALTER W. ROBERTSON, A. M.,  
*Professor of English and Latin, and Principal of the Preparatory Department.*

JOHN D. TINSLEY,  
*Professor of Biology.*

GEORGE W. MILES, M. S.,  
*Professor of Astronomy, Geology, and Physics.*

IDA M. JONES,  
*Professor of Spanish.*

## Instructors and Assistants.

---

FRANK E. LESTER,

*Instructor in Stenography and Typewriting, and College Clerk.*

R. FRED HARE, M. S.,

*Instructor in Chemistry.*

FABIAN GARCIA, B. S.,

*Assistant in Agriculture and Horticulture.*

CHARLES MILLS,

*Instructor in College Shops.*

ELLEN F. GIBSON,

*Instructor in Elocution and Physical Culture, and Assistant in  
the Preparatory Department.*

GERALDINE COMBS,

*Assistant in the Preparatory Department.*

JOSEPH F. BENNETT, Jr. B. S.

*Instructor in Bookkeeping.*

## Faculty Committees.

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### COURSE OF STUDY.

John P. Owen, *Chairman*,  
Clarence T. Hagerty, Walter W. Robertson.

### CATALOGUE.

Clarence T. Hagerty, *Chairman*,  
George W. Miles, John D. Tinsley.

### JUDICIARY.

Arthur Goss, *Chairman*,  
Walter W. Robertson, John D. Tinsley.

### BUILDINGS AND GROUNDS.

George Vestal, *Chairman*,  
John D. Tinsley, Frank W. Brady

### LEGISLATION FOR COLLEGE.

Frank W. Brady, *Chairman*,  
George Vestal, John P. Owen.

### ENTERTAINMENT.

Walter W. Robertson, *Chairman*,  
Clarence T. Hagerty, Ida M. Jones.

### BOARDING.

John D. Tinsley, *Chairman*,  
George W. Miles, Arthur Goss.

### DISCIPLINE.

George W. Miles, *Chairman*,  
Frank W. Brady, Ida M. Jones.

### LIBRARY.

Ida M. Jones, *Chairman*,  
John P. Owen, Arthur Goss.

NOTE.—The President of the Faculty is Ex-Officio member of all committees.

## GENERAL STATEMENT.

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### LOCATION.

The New Mexico College of Agriculture and Mechanic Arts is situated at Mesilla Park, Dona Ana County, about two miles south-east of Las Cruces. Its location in the Mesilla Valley, gives it the best advantages for agricultural and horticultural experiments. The location is a good one from a sanitary point of view. The campus is high and dry, and there are no surroundings which can breed disease. The college farm is crossed near the center by a fine driveway from Mesilla Park station to the College buildings. Visitors are always welcome.

Las Cruces is on the main line of the Atchison, Topeka & Santa Fe Railroad, and is accessible from the different parts of the Territory. It has a population of about 2500 people, and all lines of business are carried on. It has a good public school, several mission schools, and a Catholic Academy for the education of girls. The Presbyterians, Methodists and Catholics have large congregations and fine churches, and students are welcomed to their services. The town is noted for being the largest fruit and alfalfa shipping point in the Territory, and is rapidly becoming known as one of the finest winter health resorts in the United States.

### ORIGIN.

The New Mexico College of Agriculture and Mechanic Arts, under a slightly different name, was established by the Twenty-eighth Legislative Assembly of New Mexico by act approved

February 28, 1889. The purpose of the institution is clearly defined in Section 19, of this act:—

“The Agricultural College created and established by this act, shall be non-sectarian in character, and devoted to practical instruction in agriculture, mechanic arts, natural sciences connected therewith, as well as a thorough course of instruction in all branches of learning bearing upon agriculture and other industrial pursuits.”

The branches of learning in which instruction may be given are set forth as follows in Section 20 of the same act:—

“The course of instruction of the College hereby created shall embrace the English language, literature, mathematics, philosophy, civil engineering, chemistry, animal and vegetable anatomy and physiology, the veterinary art, entomology, geology, and political, rural, and household economy, horticulture, moral philosophy, history, mechanics, and such other sciences and courses of instruction as shall be prescribed by the regents of this institution of learning.”

By Section 25 of the same act, the assent of the Legislative Assembly was given to the establishment of Experiment Stations within the Territory of New Mexico in connection with the Agricultural College in pursuance of the act of Congress approved March 2, 1887, the Hatch Act.

#### INCOME.

The revenues of this college are derived from the following sources:—

1. Students' fees.
2. Sale of college farm products.
3. Territorial tax and special appropriations.
4. The United States under Congressional Act of March 2, 1887—the Hatch fund.
5. The United States under Congressional Act of Aug. 30, 1890—the Morrill fund.

The money received from students and from the sale of products from the college farm has, so far, been very limited in



amount, and has been used principally for paying expenses not provided for by either of the acts of Congress.

The Territorial Act creating the institution provided for an annual levy of one-fifth of a mill, commencing with the year 1889. This levy has, so far, yielded an annual income of about \$7,000.

By the United States Law of March 2, 1887, the *Hutch Act*, appropriations are made for the maintenance of Experiment Stations in connection with the Agricultural Colleges in the various states and territories. For the support of each station there is set apart the sum of \$15,000, which is payable quarterly. This money must be used for "paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results." Bulletins showing progress must be printed each quarter, and sent to each newspaper in the Territory and to all farmers who apply for them. This fund first became available for this College in 1889-90 to the amount of \$10,000. Since July 1, 1890, \$15,000 a year has been received. *After the first year, only five per cent of this fund can be used to erect, enlarge, or repair buildings for the use of the Experiment Station.*

The *Morrill fund* was created by the United States law of Aug. 30, 1890, "for the more complete endowment and support of the Colleges of Agriculture and Mechanic Arts in the several states and territories." It is paid over to them before July 31, of each year. The College received this fund first in 1890 to the amount of \$15,000. For the coming fiscal year this fund will be \$23,000 and will increase \$1,000 a year until it reaches \$25,000, at which sum it will remain. This fund can only be applied "to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their application in the industries of life, and to the facilities for such instruction." *No part of this fund can be used in any way for building purposes.*

## ENDOWMENT.

When New Mexico becomes a State, it will receive, under the act of Congress, approved July 2, 1862, a grant of land for endowing the Agricultural College amounting to 30,000 acres for each Senator and Representative in Congress. This would now entitle us to 90,000 acres. If this amount of land be carefully located, it can be made to yield the college in time a fair endowment. The amount of money derived from the sale of this land, without any deduction for expenses, must be safely invested in such manner as to yield not less than five per cent revenue. The interest only can be used for the support of the college.

## Requirements for Admission.

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To enter the Freshman class of the college, students must be at least sixteen years of age, and unless admitted on diploma, must pass examinations in reading, spelling, arithmetic complete, including the metric system, algebra through quadratics, U. S. history, geography, grammar complete, composition, the elements of rhetoric, and free-hand drawing. Without this preparation they can not succeed in college. Therefore, in the interests of both the college and the student, we shall insist that this preparation be thoroughly made.

All candidates for admission to the college must furnish satisfactory evidence of good moral character.

Students from other colleges of equal rank will be admitted to corresponding classes in this college upon presentation of certificates showing rank and honorable dismissal.

### COMMISSIONED HIGH SCHOOLS.

The Principals and Superintendents of the High Schools herein enumerated are authorized to prepare students for admission to the New Mexico College of Agriculture and Mechanic Arts:—

Raton High School.

Las Vegas High School.

Albuquerque High School.

Deming High School.

Eddy High School.

Roswell High School.

El Paso High School.

Upon presentation of Diplomas, graduates of the above mentioned High Schools will be admitted without examination to the course in Stenography and Type Writing or to the Freshman class in any of the Collegiate courses of this institution. Advanced standing may be secured by passing the required examinations.

Students who have completed spelling, reading, grammar,

geography, arithmetic, and U. S. history in the public schools of the above named places in a satisfactory manner, and can produce certificates to that effect, will be admitted to the Sub-Freshman class, or to the course in Bookkeeping, without examination. Such students must be not less than fifteen years of age.

#### COMMISSIONED GRADED SCHOOLS.

The Principals of the Graded Schools herein named are authorized to prepare students for admission to the Sub-Freshman class and to the course in Bookkeeping:—

Las Cruces Graded School.

Silver City Graded School.

Socorro Graded School.

Gallup Graded School.

Blossburg Graded School.

Clayton Graded School.

Springer Graded School.

White Oaks Graded School.

Students of the above named schools, who have completed spelling, reading, grammar, geography, U. S. history, and arithmetic, in a satisfactory manner and hold certificates to that effect, will be admitted without examination to the Sub-Freshman class or to the course in Bookkeeping, provided they be not less than fifteen years of age.

The college reserves the right to withdraw these commissions at any time should the character of the work done fall below the required standard of excellence.

## COURSES OF STUDY.

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The following Collegiate Courses of Study have been provided:—

- I. Agricultural Course.
- II. Mechanical Engineering Course.
- III. Civil Engineering Course.
- IV. Scientific Course.

With a very few exceptions, these courses are alike in the Freshman and Sophomore years. For these years, the branches of study have been selected for their value in attaining mental culture, in widening the student's intellectual horizon, and in furnishing the necessary information for the strictly technical studies of the Junior and Senior years. An attempt is made to carefully supplement theory with practice in all courses.

Special courses will not be encouraged by the Faculty. With the variety of regular courses given, there is little need for them. Students of mature years, who are not able to remain long enough to take a full course, may be allowed to take special courses. The Faculty reserves the right to refuse such requests, or to order such modifications as may seem the best for the student and college. No degrees are granted for special work, but those who perform such work in a satisfactory manner will receive certificates.

## DEGREES.

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The degree of *Bachelor of Science (B. S.)* is conferred on students who satisfactorily complete the work prescribed in any of the four Collegiate courses of study.

The degree of *Master of Science (M. S.)* is conferred on students, who, after taking at this College the degree of B. S., shall pursue for at least one year at this College, or two years elsewhere, a course of study, approved by the Faculty, in at least two departments, pass a thorough examination in the same, and present a satisfactory thesis.

*COURSES OF STUDY.—Sub-Freshman Class.*

FIRST TERM.	SECOND TERM.	THIRD TERM.
Reading and Elocution.....	Reading and Elocution.....	Reading and Elocution.....
Word Analysis.....	Word Analysis.....	Word Analysis.....
Algebra.....	Algebra.....	Algebra.....
English Grammar and Rhetoric.....	English Grammar and Rhetoric.....	English Grammar and Rhetoric.....
Advanced U. S. History.....	Civics.....	Physical Geography.....
Drawing.....	Drawing.....	Drawing.....
Botany.....	Botany.....	Advanced Arithmetic.....

*PREPARATORY DEPARTMENT.*

SECOND YEAR'S CLASS.

Reading.....	Reading.....	Reading.....
Spelling.....	Spelling.....	Spelling.....
Complete Arithmetic.....	Complete Arithmetic.....	Complete Arithmetic.....
English Grammar.....	English Grammar.....	English Grammar.....
Penmanship.....	Penmanship.....	Penmanship.....
United States History.....	United States History.....	United States History.....

FIRST YEAR'S CLASS.

Reading.....	Reading.....	Reading.....
Spelling.....	Spelling.....	Spelling.....
Arithmetic.....	Arithmetic.....	Arithmetic.....
English Grammar.....	English Grammar.....	English Grammar.....
Penmanship.....	Penmanship.....	Penmanship.....
Geography.....	Geography.....	Geography.....



## COURSES OF STUDY.—Freshman Year.

	AGRICULTURAL.	MECHANICAL ENGINEERING.	CIVIL ENGINEERING.	SCIENTIFIC.
First Term.	Geometry.....5 Spanish or Latin.....5 General History.....5 English.....3 PRACTICE. Carpentry and Joinery.....7 Free-hand Drawing.....5 Elocution.....1	Geometry.....5 Spanish or Latin.....5 General History.....5 English.....3 PRACTICE. Carpentry and Joinery.....7 Free-hand Drawing.....5 Elocution.....1	Geometry.....5 Spanish or Latin.....5 General History.....5 English.....3 PRACTICE. Carpentry and Joinery.....7 Free-hand Drawing.....5 Elocution.....1 Floriculture.....7	Geometry.....5 Spanish or Latin.....5 General History.....5 English.....3 PRACTICE. Carpentry and Joinery.....7 Free-hand Drawing.....5 Elocution.....1 Floriculture.....7
Second Term.	Geometry.....5 General History.....5 Spanish or Latin.....5 English.....3 PRACTICE. Wood Turning.....7 Free-hand Drawing.....5 Elocution.....1	Geometry.....5 General History.....5 Spanish or Latin.....5 English.....3 PRACTICE. Wood Turning.....7 Free-hand Drawing.....5 Elocution.....1	Geometry.....5 General History.....5 Spanish or Latin.....5 English.....3 PRACTICE. Wood Turning.....7 Free-hand Drawing.....5 Elocution.....1	Geometry.....5 General History.....5 Spanish or Latin.....5 English.....3 PRACTICE. Wood Turning.....7 Free-hand Drawing.....5 Elocution.....1 Historical Reading.....5
Third Term.	Geometry.....5 Algebra.....5 Spanish or Latin.....4 English.....2 PRACTICE. Blacksmithing.....7 Anatomy.....5 Elocution.....1	Geometry.....5 Algebra.....5 Spanish or Latin.....4 English.....2 PRACTICE. Blacksmithing.....7 Mechanical Drawing.....5 Elocution.....1	Geometry.....5 Algebra.....5 Spanish or Latin.....4 English.....2 PRACTICE. Blacksmithing.....7 Anatomy.....5 Elocution.....1 Literary Reading.....5	Geometry.....5 Algebra.....5 Spanish or Latin.....4 English.....2 PRACTICE. Blacksmithing.....7 Anatomy.....5 Elocution.....1 Literary Reading.....5

\* Prescribed practice for women instead of Carpentry, Wood Turning, and Blacksmithing.  
 NOTE.—The figures denote the number of hours per week devoted to recitation and practice.

## COURSES OF STUDY.—Sophomore Year.

	AGRICULTURAL.	MECHANICAL ENGINEERING.	CIVIL ENGINEERING.	SCIENTIFIC.
First Term	Plane Trigonometry.....5 Physics.....5 Spanish or Latin.....5 English.....5 PRACTICE. Farm Work.....7 Biological Laboratory.....5 Elocution.....1	Plane Trigonometry.....5 Physics.....5 Spanish or Latin.....5 English.....5 PRACTICE. Pattern Making.....7 Mechanical Drawing.....5 Elocution.....1	Plane Trigonometry.....5 Physics.....5 Spanish or Latin.....5 English.....5 PRACTICE. English History.....5 Biological Laboratory.....5 Elocution.....1	
Second Term.	Spherical Trigonometry.....4 Physics.....5 Spanish or Latin.....5 English.....4 Surveying.....2 PRACTICE. Surveying.....6 Biological Laboratory.....5 Elocution.....1	Spherical Trigonometry.....4 Physics.....5 Spanish or Latin.....5 English.....4 Surveying.....2 PRACTICE. Surveying.....6 Pattern Making.....7 Elocution.....1	Spherical Trigonometry.....4 Physics.....5 Spanish or Latin.....5 English.....4 Surveying.....2 Recent History.....*5 PRACTICE. Surveying.....6 Biological Laboratory.....5 Elocution.....1	
Third Term.	Horticulture.....5 Physics.....5 Spanish or Latin.....5 Political Science.....5 PRACTICE. Biological Laboratory.....5 Farm Work.....7 Elocution.....1	Higher Algebra.....5 Physics.....5 Spanish or Latin.....5 Descriptive Geometry.....5 PRACTICE. Mechanical Drawing.....5 Foundry.....7 Elocution.....1	Higher Algebra.....5 Physics.....5 Spanish or Latin.....5 Political Science.....5 PRACTICE. Biological Laboratory.....5 Home Hygiene.....5 Elocution.....1	

\* For women instead of Surveying.

NOTE.—The figures denote the number of hours per week devoted to recitation and practice.

COURSES OF STUDY.—*Junior Year.*

AGRICULTURAL.	MECHANICAL ENGINEERING.	CIVIL ENGINEERING.	SCIENTIFIC.
Agriculture ..... 5 Political Economy ..... 5 Elementary Mechanics ..... 5 English ..... 3  PRACTICE. Farm Work ..... 7 Biological Laboratory ..... 5 Elocution ..... 1	Analytic Geometry ..... 5 Political Economy ..... 5 Elementary Mechanics ..... 5 English ..... 3  PRACTICE. Machine Shop ..... 7 Elementary Machine Design ..... 5 Elocution ..... 1	Analytic Geometry ..... 5 Political Economy ..... 5 Elementary Mechanics ..... 5 English ..... 3  PRACTICE. Surveying ..... 7 Topographical Drawing ..... 5 Elocution ..... 1	Anal. Geom., Span., or Latin ..... 5 Political Economy ..... 5 Elementary Mechanics ..... 5 English ..... 3  PRACTICE. American Literature ..... 7 Biological Laboratory ..... 5 Elocution ..... 1
Animal Husbandry ..... 5 Chemistry ..... 10 English Literature ..... 5  PRACTICE. Biological Laboratory ..... 10 Elocution ..... 1	Analytic Geom. & Calculus ..... 5 Chemistry ..... 10 Mechanism ..... 5  PRACTICE. Machine Shop ..... 7 Elementary Machine Design ..... 5 Elocution ..... 1	Analytic Geom. & Calculus ..... 5 Chemistry ..... 10 Mechanism ..... 5  PRACTICE. Surveying and Mapping ..... 12 Elocution ..... 1	Anal. Geom. & Cal. Span. or Lat. 5 Chemistry ..... 10 English Literature ..... 5  PRACTICE. Biological Laboratory ..... 10 Elocution ..... 1
Horticulture ..... 5 Constitutional Law ..... 5 History of Education ..... 5 English ..... 3  PRACTICE. Chemical Laboratory ..... 12 Elocution ..... 1	Calculus ..... 5 Strength of Materials ..... 5 Analytical Mechanics ..... 5 English ..... 3  PRACTICE. Chemical Laboratory ..... 12 Elocution ..... 1	Calculus ..... 5 Strength of Materials ..... 5 Analytical Mechanics ..... 5 English ..... 3  PRACTICE. Chemical Laboratory ..... 12 Elocution ..... 1	Calculus, Spanish, or Latin ..... 5 Constitutional Law ..... 5 History of Education ..... 5 English ..... 3  PRACTICE Chemical Laboratory ..... 12 Elocution ..... 1

NOTE.—The figures denote the number of hours per week devoted to recitation and practice.

*COURSES OF STUDY.—Senior Year.*

AGRICULTURAL.	MECHANICAL ENGINEERING.	CIVIL ENGINEERING.	SCIENTIFIC.
<p>Agriculture.....5</p> <p>Geology.....5</p> <p>Entomology.....5</p> <p>Astronomy.....3</p> <p>PRACTICE.</p> <p>Agriculture, Horticulture, Chemistry, or Biology.....12</p>	<p>Hydraulics.....5</p> <p>Geology.....5</p> <p>Steam Engineering.....5</p> <p>Astronomy.....3</p> <p>PRACTICE.</p> <p>Machine Shop.....7</p> <p>Machine Design.....5</p>	<p>Hydraulics.....5</p> <p>Geology.....5</p> <p>Irrigation Engineering.....5</p> <p>Astronomy.....3</p> <p>PRACTICE.</p> <p>Irrigation Surveying.....7</p> <p>Roofs and Bridges.....5</p>	<p>Logic.....5</p> <p>Geology.....5</p> <p>Entomology.....5</p> <p>Astronomy.....3</p> <p>PRACTICE.</p> <p>Chemistry or Biology.....12</p>
<p>Horticulture.....5</p> <p>Stock.....5</p> <p>Mineralogy.....5</p> <p>English.....3</p> <p>PRACTICE.</p> <p>Agriculture, Horticulture, Chemistry, or Biology.....12</p>	<p>Hydraulics.....5</p> <p>Steam and Boilers.....5</p> <p>Engineering Structures.....5</p> <p>English.....3</p> <p>PRACTICE.</p> <p>Engine and Boiler Tests.....7</p> <p>Roofs and Bridges.....5</p>	<p>Hydraulics.....5</p> <p>Astronomy.....2</p> <p>Mineralogy.....5</p> <p>History of Civilization.....3</p> <p>English.....3</p> <p>PRACTICE.</p> <p>Railroad Surveying.....7</p> <p>Roofs and Bridges.....5</p>	<p>Logic.....5</p> <p>Astronomy.....2</p> <p>Mineralogy.....5</p> <p>History of Civilization.....3</p> <p>English.....3</p> <p>PRACTICE.</p> <p>Chemistry or Biology.....12</p>
<p>Economic Bot. and Entomol.....5</p> <p>Geology.....5</p> <p>Diseases of Animals.....2</p> <p>Elocution and Oration.....4</p> <p>PRACTICE.</p> <p>Thesis.....12</p>	<p>Engineering Structures.....5</p> <p>Electrical Engineering.....5</p> <p>Transmission of power.....2</p> <p>Elocution and Oration.....4</p> <p>PRACTICE.</p> <p>Thesis and Thesis Drawings.....12</p>	<p>Engineering Structures.....5</p> <p>Geology.....5</p> <p>Astronomy.....2</p> <p>Elocution and Oration.....4</p> <p>PRACTICE.</p> <p>Thesis and Thesis Drawings.....12</p>	<p>Logic.....5</p> <p>Geology.....5</p> <p>Astronomy.....2</p> <p>Elocution and Oration.....4</p> <p>PRACTICE.</p> <p>Thesis.....12</p>

NOTE.—The figures denote the number of hours per week devoted to recitation and practice.

# DEPARTMENTS OF INSTRUCTION.

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## AGRICULTURE AND HORTICULTURE.

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GEORGE VESTAL, PROFESSOR.

FABIAN GARCIA, ASSISTANT.

Agriculture and Horticulture involve a larger number of sciences than any other human employment, and become a fit sequence to a collégiate training. It is the policy to give this department of the college the largest development practicable, and to meet the full demand for agricultural education as fast as it shall arise.

It is the aim of this department to teach agriculture in such a way as to give the student a correct understanding of the scientific principles which underlie the operations of the farm. In the class room, the subjects are taught by lectures, and time is given frequently for oral and written discussions, by the students, of the principles taught. A course of reading of standard agricultural and horticultural books and periodicals, supplements work done by lectures. The practice consists of work on the Experiment Station Farm, orchards, vineyards, gardens, campus, etc., under the supervision of a skilled person with a view of putting into practice the theories advanced in the class room. The practice will be along lines having a direct bearing on the class room work outlined in the course of study. In these studies, students will be required to take and preserve notes as a record of the work done in the class room and field.

In the first term of the Freshman year, the girls will receive instruction in floriculture, supplemented with practice which will include the propagation and care of ornamental



plants, with the view of making the knowledge gained useful in home adornment.

During the first term of the Sophomore year, the time will be spent in familiarizing the student with the functions of agricultural plants; classification, composition, and improvement of soils, etc. In the third term of this year, vegetable gardening will be taught which will include the planting, cultivation, harvesting and marketing all kinds of vegetables.

In the first term of the Junior year, the instruction will consist principally of text-book work on the following subjects: fences and farm buildings, farm conveniences, the mechanical construction and use of farm implements, etc. In the second term, there will be a study and practice on the care and management of live stock. During the third term, the time will be devoted to fruit culture, using Barry's Fruit Culture as a text-book, which includes a comprehensive study of the propagation of fruit trees and plants by seeds, cuttings, layers, grafting and budding; the planting, pruning, and general management of orchards, vineyards and small fruit gardens; and the extermination of fungi and insect pests by spraying and other means.

During the first term of the Senior year, the time is devoted to advanced agriculture which will include farm law, manner of carrying on agricultural experiments, etc. The second term of this year will consist of text-book work on landscape gardening and forestry; and on stock breeding, using Miles' Stock Breeding as a text-book. In the third term, instruction will be given in floriculture by lectures, supplemented by practice in the greenhouse. Students who wish may choose a practice in agriculture or horticulture for twelve hours a week throughout the Senior year.

*Equipment.*—The Experiment Station farm, which includes the gardens, orchards, and vineyards, contains a large collection of all the leading fruit trees and plants, and furnishes a large amount of work for agricultural students, where they have an opportunity of observing the operations usually carried on on a well regulated farm. The greenhouse and flower garden are



well filled with a choice collection of plants, and more are being constantly added. The library contains a well selected assortment of agricultural and horticultural books and periodicals.

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## CHEMISTRY.

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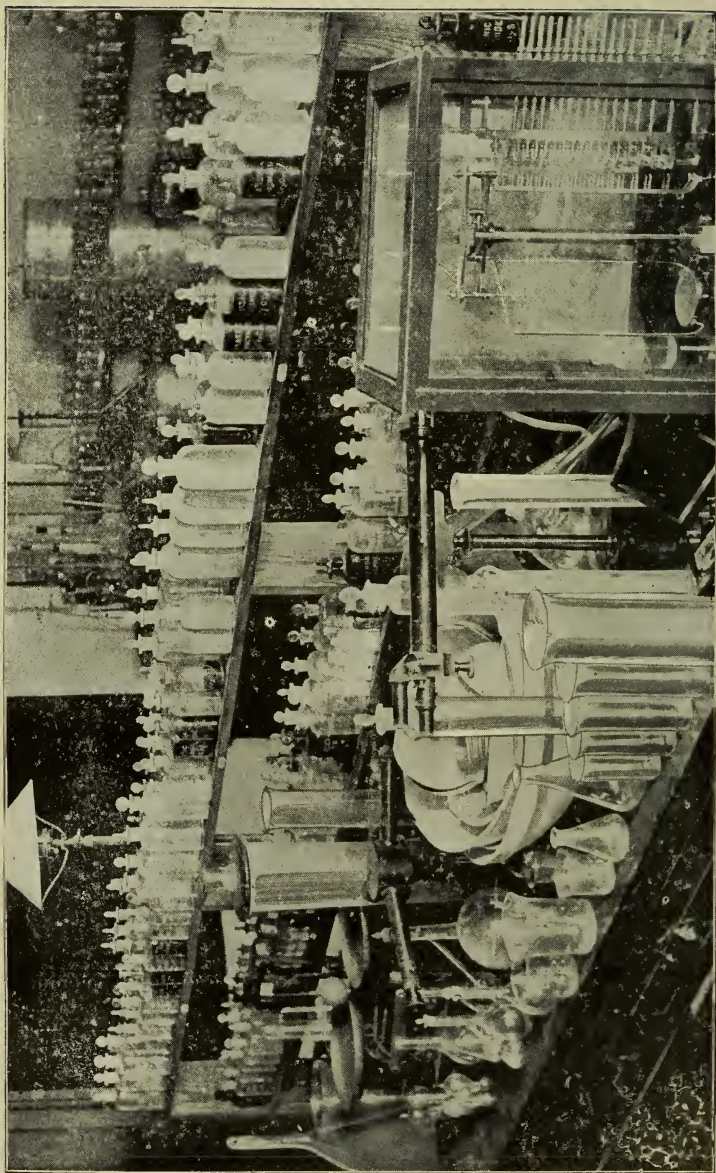
ARTHUR GOSS, PROFESSOR.

R. F. HARE, INSTRUCTOR.

*Required Chemistry.*—Chemistry is taken by all regular college students, in the second and third terms of the Junior year. The work during the second term will consist of a study of the fundamental principles of the science, as outlined in a standard text, and will be supplemented by frequent exercises in the laboratory. The time required of the students this term, besides that necessary for the preparation of lessons, will be two hours daily. During the third term twelve hours each week will be spent in the laboratory in the study of qualitative analysis. Each student will be provided with a complete set of apparatus and reagents, by means of which any ordinary compound may be analyzed. The student will thus learn, by actual practice, the various methods of separating the different elements.

*Elective Chemistry.*—Chemistry has been introduced, throughout the Senior year, as one of the elective studies. For students who elect to take chemistry, the work of the first term will consist of laboratory practice in general quantitative analysis. During this term students will receive instruction in the use of the balance and in general quantitative manipulation. Each student will be required to make some of the fundamental quantitative determinations, thus becoming familiar with quantitative processes by actual practice. The nature of the work done during the last two terms of the Senior year, will be left largely to the choice of the student, but in general will consist of work along some line of original investigation. Thus an investigation may be undertaken con-





STATION CHEMICAL LABORATORY.

cerning waters, soils, ores, forage plants, methods of analysis, or whatever subject the student may be particularly interested in; provided the same is approved by the professor in charge of the department.

#### EQUIPMENT.

At present, the chemical department occupies three rooms and two smaller store rooms in the basement of the main building. Some time within the next year, however, the department will be moved into more commodious quarters in the new Experiment Station building soon to be erected. This will permit of the performance of much more satisfactory work than has been possible in the past.

The laboratories used for the chemical work are fitted with sinks, fume closets, and work desks. The desks are supplied with gas and water pipes, drawers and lockers for apparatus, and racks for reagent bottles. Students are supplied with a full set of apparatus for laboratory work. This includes, among other things, beakers, test tubes, gas burners, porcelain dishes, flasks, wash bottles, platinum foil and wire, ring stands, filter stands, funnels, test tube racks, spatulas, tongs, blowpipes, and a full set of reagent bottles.

One of the laboratories has been fitted up with special reference to the accomodation of the Experiment Station work. This laboratory contains, among other things, two work desks which are supplied with gas, water, and air exhaust pipes for rapid filtration, a commodious hood to carry off noxious gases, apparatus for the determination of nitrogen by the Kjeldahl method, a titration shelf and system of burettes, and a first class still for the preparation of distilled water. The Station laboratory also possesses a balance table supported by posts in contact with the ground, a Springer torsion balance, a Herzberg and Kuhlmann short beam automatic analytical balance, a Scheibler's polariscope, an imported mill for grinding food stuffs, etc., and about \$500 worth of platinum ware.

While the Station laboratory is not designed for the use



of students, the work carried on there serves to illustrate actual practical analytical work.

The chemical department also possesses a Becker's analytical balance, an Eimer and Amend gold plated assay balance, sensitive to 1-200 of a milligram, a rough balance for weighing large quantities of material, a first class Bunsen spectroscope, a Bosworth ore crusher, plate and rubber, set of sieves for sampling, plant of Hoskins gasoline furnaces, and a good supply of crucibles, scorifiers, cupels, tongs, etc., for assay of ores, a collection of mineral specimens, and quite a large department library of reference books and periodicals.

The gas supply for the department is furnished by a seventy-five light gasoline gas machine.

A deep well has recently been put down on the college grounds, and a first class wind mill pumping plant put in; thus insuring a much more satisfactory water supply than in the past. The water from the new well is also of much better quality than that formerly furnished.

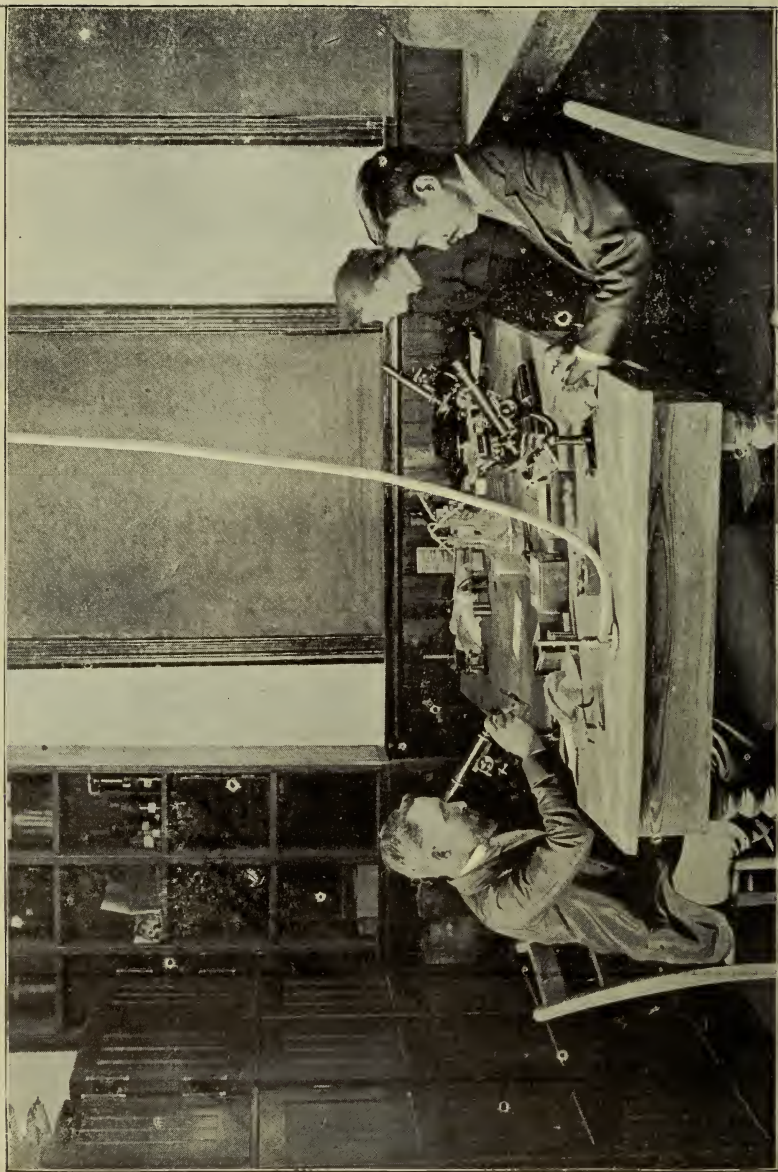
#### FEES.

At the beginning of the work in chemistry in the Junior year, and also at the beginning of the work in the Senior year, each student will be required to deposit five dollars, (\$5.00), with the college Clerk, to cover breakage of apparatus. At the close of the year, or upon withdrawing from the class, the balance of the deposit, after deducting cost of broken apparatus, will be returned to the student.

At the beginning of each term, each student taking work in assaying will be charged five dollars, (\$5.00), to cover cost of gasoline and fluxes used. None of this fee will be returned unless the student should withdraw before the end of the term. Besides the above fee of five dollars, each student taking assaying will be required to deposit ten dollars, (\$10.00), at the beginning of each term, to cover cost of crucibles, scorifiers, and other apparatus used up or broken during the term. The balance from this deposit, which is not used will be returned to the student at the end of the term.







BOTANICAL LABORATORY.

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**BIOLOGY.**

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J. D. TINSLEY, PROFESSOR.

*Elementary Anatomy.*—Freshmen, in the Agricultural and Scientific courses, devote five hours per week during the last term to the study of Mammalian Anatomy. The work consists in the dissection of typical mammals, cat and rabbit especially, followed by recitation on the work done. The object of this course is to give the students a clear understanding of the fundamental plan upon which all of the higher animals are constructed. In this work no text-book is used, but the students work from outlines put on the blackboard, and use Howell's Dissection of the Dog, Mivart's The Cat, and Wilder and Gage's Anatomical Technology, as reference books.

*Comparative Anatomy and Physiology.*—Sophomores, in the Agricultural and Scientific courses, devote five hours per week throughout the entire session to this work. They review the work of the previous term, and then take up the study of the other vertebrate animals and some invertebrates. They pay especial attention to the alimentary canal and its appendages. With the Anatomy they study Histology, and Physiology, paying especial attention to the Physiology of Digestion.

The aim of this course is to give the students a fair knowledge of the structure of animals in general, and how the various parts perform their functions. Nearly all the work is done in the laboratory, there being comparatively little recitation from books, except in the physiology. Martin's Human Body, Briefer Course, is used as the text-book in physiology, and the students are taught to consult various books of reference.

The work in anatomy and physiology is planned with especial reference to the needs of two classes of students; first, those who will have to study animal husbandry, etc., in the Agricultural course; and second, those who will teach science work in the Public Schools.

*Botany.*—Juniors in the Agricultural and Scientific courses, devote five hours per week during the first term, and ten hours

per week during the second term, to the study of Plant Anatomy and Physiology. With this some time will also be devoted to the study of the classification of plants.

The aim of this work is rather to give the student clear ideas of the relations of the various parts of the plant to each other, and the relation of the plant to the soil and air, than to enable him to identify the plants around him, which in this region is a very difficult task.

Bessey's Botany, Briefer Course, will be used as a text-book, supplemented by reference books.

*Plant Physiology.*—Seniors in the Agricultural and Scientific courses will be offered further work in plant physiology. They will take up special problems and pursue them as far as time permits.

*Entomology.*—Seniors in the Agricultural and Scientific courses will be required to devote five hours per week, during the first term, to the study of entomology. This course will give the students a general idea of the principal groups of insects and their modes of life, especial attention being given to injurious insects, and means of destroying them.

*Economic Entomology and Botany.*—Seniors in the Agricultural course will be required to devote five hours per week during the last term to this subject. The work in entomology will be a continuation of that of the first term. The economic botany will relate chiefly to fungous diseases and their treatment.

In addition to the above regular courses, graduate work will be offered in botany along the following lines:—

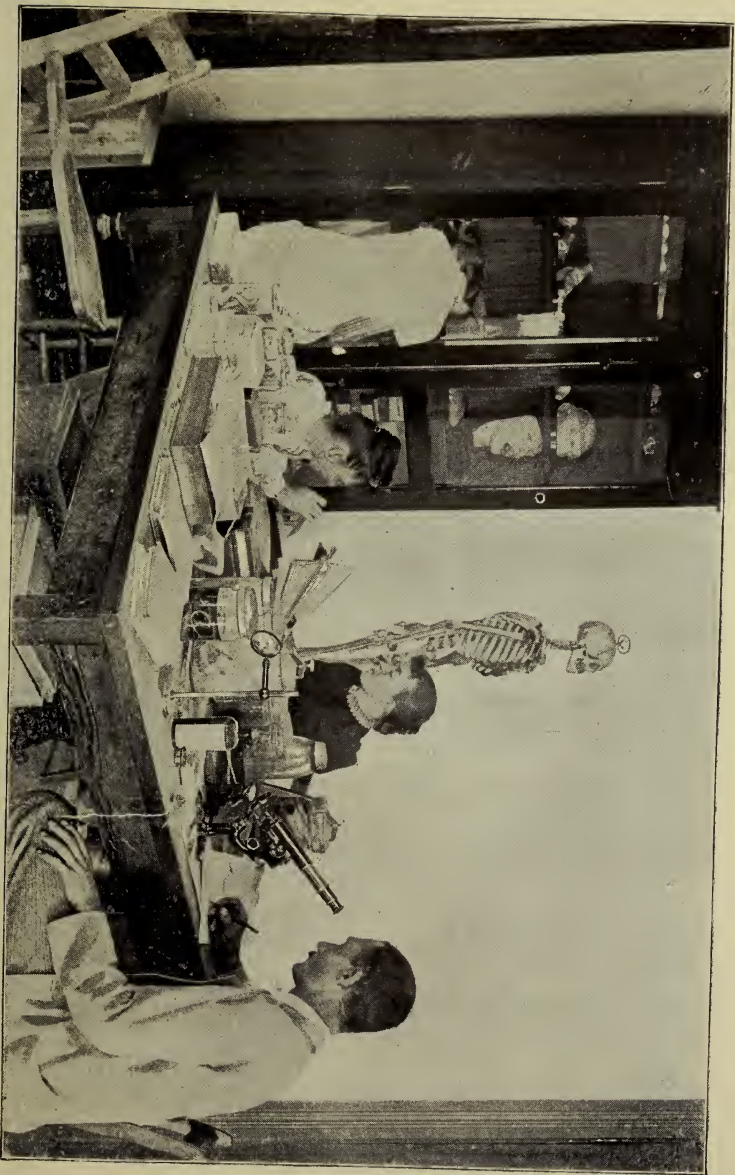
a. *Plant Physiology.*—Continuation of the work as outlined in the Senior year.

b. *Bacteriology and Mycology.*—Studies in the life-histories of bacteria and fungi producing plant diseases.

c. *Systematic Botany* with especial reference to the flowering plants and ferns of this region.

*Equipment.*—The laboratories of this Department will occupy four rooms in the second story of the new Experiment Station building, which will probably be completed early in the coming session. These laboratories will be well equipped





STUDENTS' CHEMICAL LABORATORY.



with Bausch & Lomb's compound "Model" microscopes, microtomes, water ovens, and other necessary apparatus. A complete outfit for Bacteriological work will be added this summer, as well as apparatus for work in Plant Physiology.

The Department Library is well supplied with works on botany, zoology, anatomy, and physiology.

There is a set of Bock Steger models for illustrating human anatomy.

The Herbarium contains about 3000 specimens of flowering plants, and is being added to from time to time.

In addition to the College collections the students have access to the Experiment Station collections, and also have the advantage of observing the work carried on by the Station. Students are held responsible for instruments and apparatus while in their charge.

### ENGINEERING.

FRANK W. BRADY, PROFESSOR.

CHARLES MILLS, INSTRUCTOR IN SHOPS.

This department offers two regular courses, each four years in length:—

I. Mechanical Engineering.

II. Civil Engineering.

Instruction is given by lectures, recitations, and practice so combined as to constitute a symmetrical course of study. The endeavor is to provide the student with a broad foundation of general and theoretical knowledge, together with a liberal amount of actual practice in his chosen profession.

During the first two years, the studies of both courses are identical. The difference between the courses, is to be found in the nature of the practice work and drawing during the last two years. The mechanical students confine themselves to shop work and mechanical drawing, while the students in civil engineering undertake instead, surveying operations, mapping, and topographical drawing.

In each course, much time is necessarily devoted to higher



mathematics and technical subjects; yet certain other fundamental studies, necessary for a broad and liberal education, such as history, political economy, languages, literature, chemistry, and elocution, are amply provided for.

#### I.—MECHANICAL ENGINEERING.

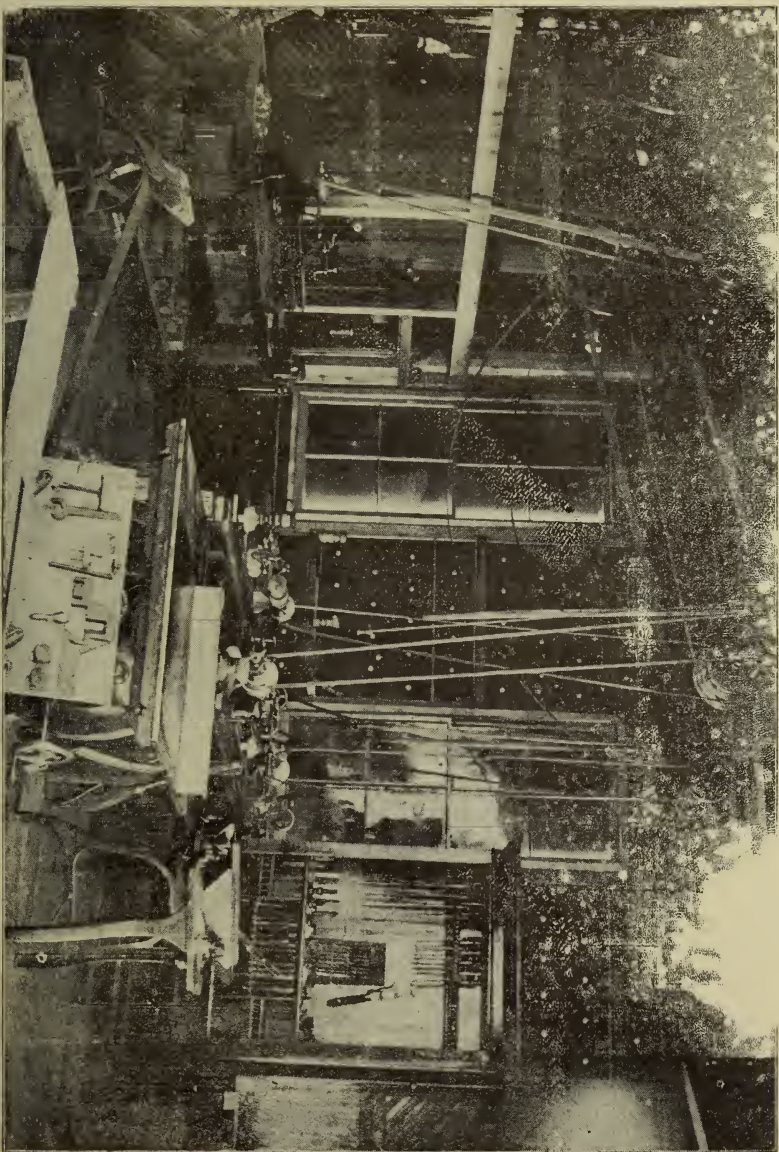
In this course the student is given a thorough training in the theoretical branches underlying the science of machines, together with a clear understanding of the practical construction of mechanical devices. In addition to the advanced mathematical and general studies common to other courses, this course includes instruction in free-hand and mechanical drawing, descriptive geometry, theoretical and applied mechanics, hydraulics, engineering structures, electrical engineering, strength of materials, mechanism, machine design, steam engineering, and shop practice.

*Free-hand Drawing.*—The importance of free-hand drawing as a discipline for the powers of observation can hardly be over-estimated. It educates the eye to note accurately all details of position and form, and trains the mind and hand to reproduce correctly what the eye sees. All Freshman students are required to take free-hand drawing, five hours per week, for the first two terms.

*Mechanical Drawing.*—All Engineering students take mechanical drawing in the third term of the Freshman year and in the first and third terms of the Sophomore year. This subject embraces instruction in the use and care of drafting instruments, exercises in geometrical construction, lettering, plane projections, shading and coloring; followed by detail and assembled working drawings of machinery, with tracings and blue prints therefrom.

Throughout the Junior and Senior years, mechanical drawing is merged into machine design, of which it forms an important part, and affords constant opportunity for further practice in making detail working drawings of standard types of machinery.

*Machine Design.*—This work is done principally in the



WOOD SHOP.



drawing room, and consists in the design of the elements of machinery, such as nuts and bolts, rivets and riveted joints, journals and bearings, pulleys, gears, etc.

*Descriptive Geometry* is taught to all students in the Engineering courses. The principles of orthographic projection, developments of lines and surfaces, etc., are fully discussed in the class room; and a great variety of problems, illustrating both general and special cases, are solved and constructed by the student.

*Mechanics*.—The general laws of statics and dynamics are studied with reference to solids, liquids, and gases; and the fundamental principles are applied to the solution of a wide range of problems.

*Mechanism*.—Under this head are studied the principle underlying the action of the elementary combinations of which all machines are composed; the communication of motion by gear-wheels, belts, cams, screws, and link-work, etc.

*Hydraulics* includes the study and application of the theoretical principles of the subject to the various problems involved; such as, the flow of water through orifices, short and long tubes, conduits, and in open channels; gauging of streams, measurement of water power, etc.

*Engineering Structures*.—This subject embraces a study of the design and construction of foundations and superstructures, the selection of materials, superintendence, specifications, etc.

*Strength of Materials*.—This subject includes the study of the characteristics, method of manufacture, and useful properties of the various materials of construction; and an investigation of their strength, elasticity, and other physical properties.

*Steam Engineering*.—The student makes a study of the general principles of the steam engine and the various types of engines and boilers in common use, and investigates the many problems relating to their structure and efficiency.

*Electrical Engineering and Power Transmission*.—This subject embraces a study of the fundamental principles of



electric power generation and the application of electricity to lighting, and in street railway and mining work.

*Shop Practice*, offering, as it does, practical illustrations of the precepts taught in the class room, is a most essential part of the Mechanical Engineering course, and this work is given a prominent position. At the same time, it is believed that this training is valuable for men in every walk of life. Accordingly every male student in the regular college courses is required to take Shop Practice during the Freshman year. This work consists of one term in Carpentry, one in Wood Turning, and one in Blacksmithing. For the regular Mechanical Engineering students, the manual training will continue four years, and it will embrace, in addition to that in the Freshman year, foundry work and pattern making and general machine work.

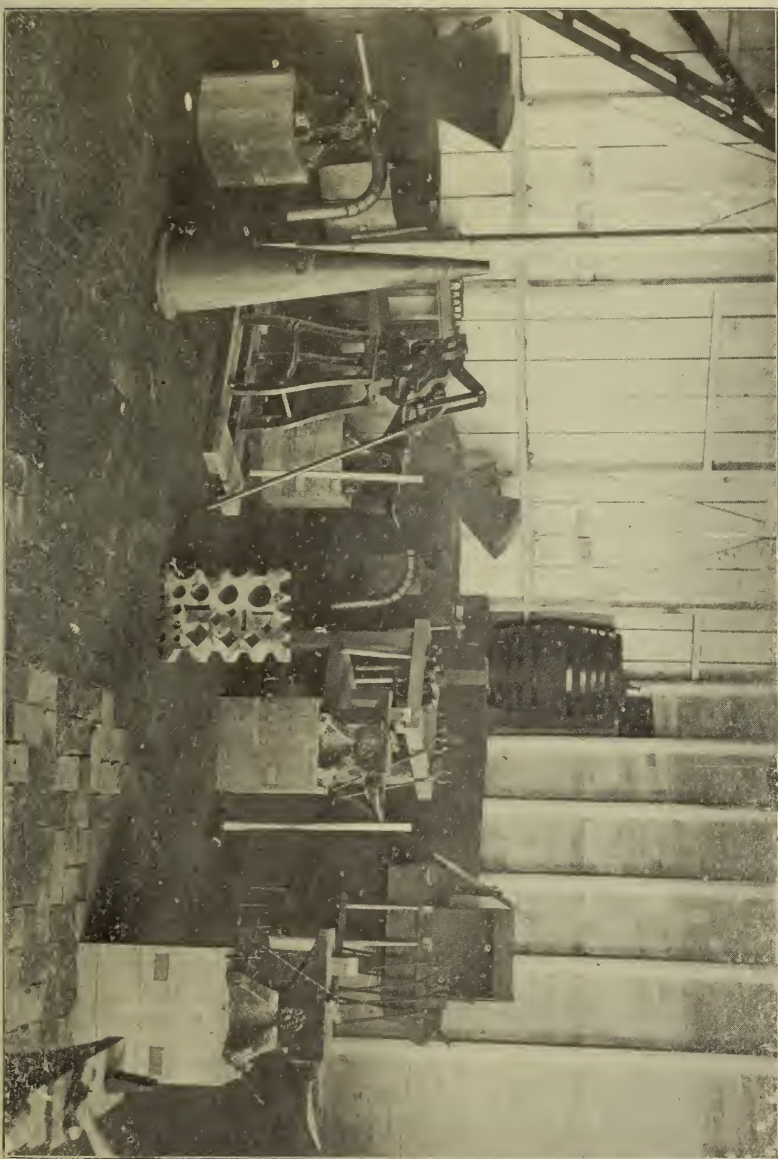
*Equipment.*—The department has two commodious buildings devoted exclusively to its work.

One of these buildings has rooms for blacksmith shop, foundry, and storage. The large new building contains two recitation rooms and a hall, an engine and boiler room, and rooms for wood work and for machine work.

In the forge room are six forges of the latest model, with improved underground arrangements of the blast and exhaust pipes. Each forge is fitted with a full assortment of tongs, hammers, swages, fullers, etc. An 18-inch drill press and a punching and shearing machine form a part of the outfit of this section.

The wood room has seven turning lathes, one combination rip and cross-cut circular saw, one Fox trimmer, a forty-inch grindstone, one 18 inch x 6 inch surface planer, one No. 3 patent strain scroll saw, and a good supply of small tools and appliances.

In the machine room, there are one 16 inch x 6 foot tool room lathe with compound rest and taper attachment, one 14 inch x 8 foot standard engine lathe, one 24 inch x 24 inch x 6 foot planer, one 22 inch power drill press, one improved emery



FORGE SHOP.





wheel grinder; also a large number and good assortment of chucks, drills, small tools, and machine attachments.

The power equipment consists of one 8-H. P. Shipman engine and boiler, one 30-H. P. Weston automatic engine, one 40-H. P. tubular boiler, feed water purifier, and Duplex pump.

## II.—CIVIL ENGINEERING.

The course in Civil Engineering, in addition to the general studies common to the other college courses, will include instruction in theoretical and applied mechanics, theoretical hydraulics, hydraulic motors, hydraulic engineering, graphic statics, stresses in roofs, bridges and arches, roof and bridge design, foundations, construction of roads and railways, street paving, masonry construction, and field practice.

The instruction in hydraulics will include the application of theoretical principles to the ordinary problems of engineering practice; such as, the design of dams, reservoirs, pipe lines, canals, etc.

In roofs, bridges, and arches, the students will be given a thorough drill in the methods of determining stresses by analytical and graphical methods; and the details of construction. They will also make designs for a roof truss, and a railway bridge.

*Surveying.*—The instruction will be such as to render the students familiar with the principal instruments and methods used in plane, topographical, trigonometrical, hydrographic, city, and railroad surveying. Surveys will be made, notes plotted, and areas computed. Some time will be devoted to the study of the laws and court decisions relating to boundaries, re-location of lost corners, etc. Students will have practice in determining the true meridian and latitude, by observations of the north star and of the sun. Topographical maps must be made from the field notes.

Instruction in railroad surveying will include problems in simple, reversed, and compound curves, turnouts, earthworks, and economics of location. Students will be required to make

reconnaissance, preliminary and location surveys for a line of railroad, set grade and slope stakes, and calculate the cubical content of excavations. Railroad maps and profiles must be made from the field notes.

*Equipment.*—The equipment consists of a surveyor's compass, two surveyor's transits, one of which has a gradiometer and solar attachment, engineer's level, plane table, aneroid barometer, current meter and register, hook gauge, polar planimeter, hand level and clinometer, optical square, pantograph, chains, steel tapes, leveling rods, poles, etc.

#### THESIS.

As a condition of graduation, each Senior in the Engineering courses must prepare an acceptable Thesis and Thesis Drawing which shall remain the property of the College.

An excellent department Library, containing standard works on subjects pertaining to the engineering profession, is accessible to the students.

*Deposits*—Students taking any of the practice work, (exclusive of Chemistry) in the Engineering courses will be required to deposit at the beginning of the work each year five dollars, to cover breakage or damage, and to renew the amount at any time it becomes necessary to meet the expenses so caused. At the end of the year or on completion of the work the amount not forfeited will be returned.

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#### MATHEMATICS.

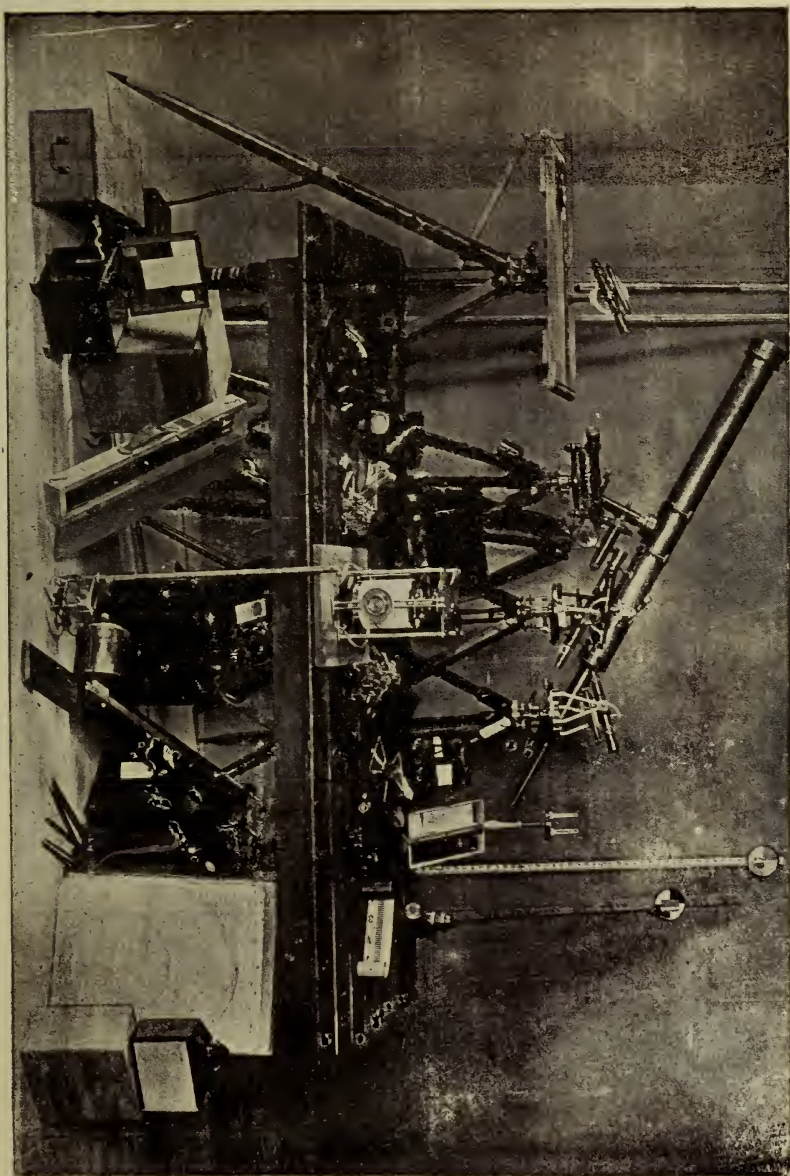
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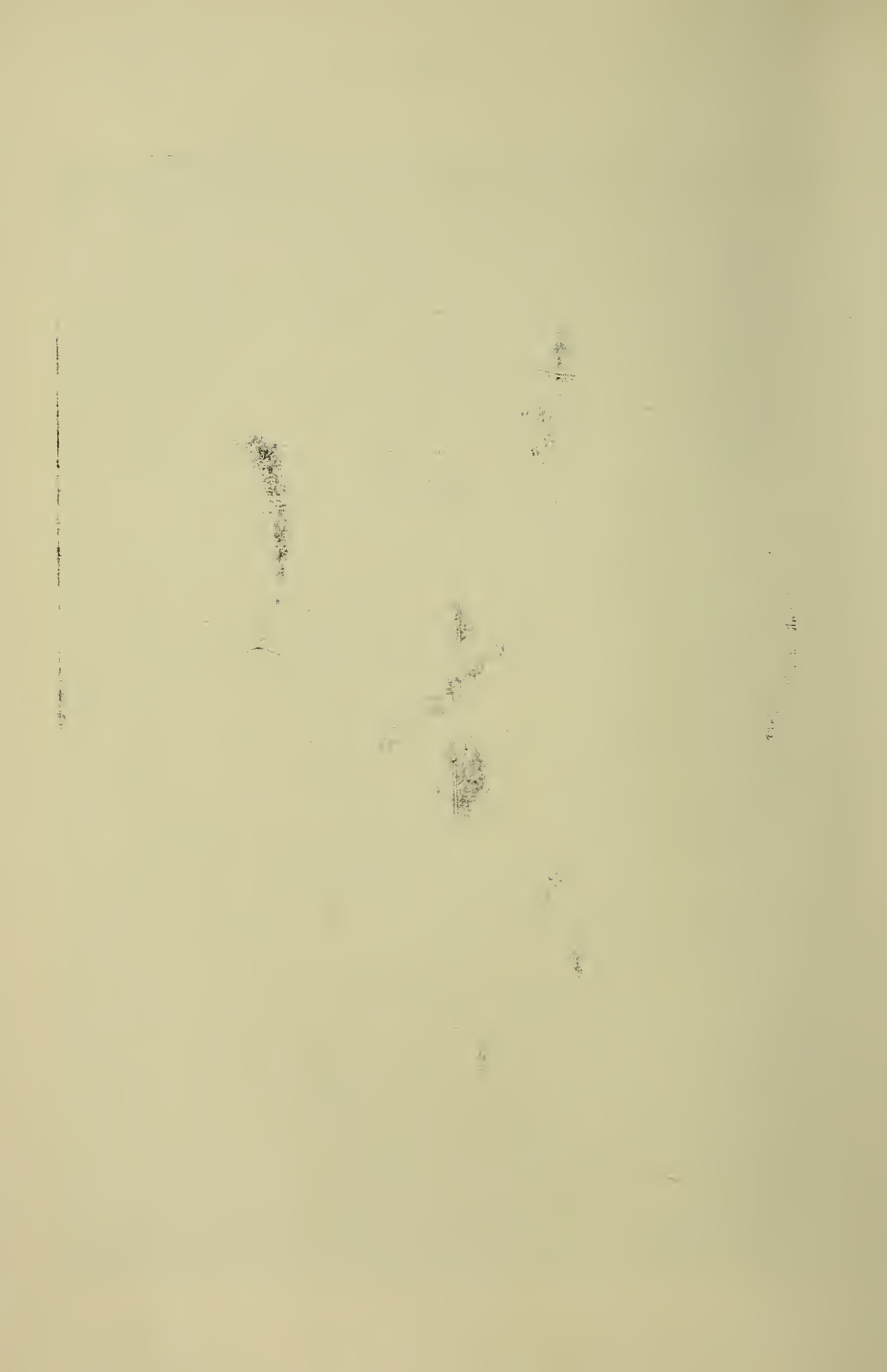
C. T. HAGERTY, PROFESSOR.

*Geometry.*—The Freshman class study plane geometry in the first and second terms, and solid and spherical geometry and a brief treatise on conic sections in the third term. Original exercises form a large part of the work throughout the year, and constitute an important factor in examinations. Wentworth's Plane and Solid Geometry is the text-book used.

*Algebra.*—All students admitted to the Freshman class

CIVIL ENGINEERING EQUIPMENT.





have completed algebra through quadratics in Milne's High School Algebra, or an equivalent. The advanced algebra taught in the third term of the Freshman year, embraces the following subjects: ratio, proportion, variation, progressions, indeterminate equations, inequalities, and logarithms. At the beginning of the term some time will be devoted to a review of the more difficult subjects of elementary algebra. In the third term of the Sophomore year, higher algebra is taught, which includes permutations and combinations, undetermined coefficients, binomial theorem (any exponent), scales of notation, variables and limits, theory of numbers, series, and theory of equations.

*Trigonometry.*—Plane trigonometry is taught in the first term of the Sophomore year; and spherical trigonometry, in the second term. The functions are treated both as ratios and lines. The fundamental formulae are carefully deduced, and many practical problems are solved. In order to get a clear conception of the measurement of angles, students use protractors, trigonometer, and a surveyor's transit.

*Analytic Geometry.*—All students in the Engineering courses are required to study plane analytic geometry in the first term of the Junior year. They solve many problems in order to become familiar with the methods of the subject. Several of the higher plane curves and geometry of three dimensions are studied in the first five weeks of the second term.

*Calculus.*—Engineering students are required to study the differential and integral calculus in the last seven weeks of the second term of the Junior year, and throughout the third term. The method of rates is employed.

The Scientific students are not required to pursue the mathematical studies after the Sophomore year, but they may continue the work in mathematics if they desire to do so.

The instruction in all branches of mathematics is made as practical as possible.

This department has Kennedy's dissected geometrical blocks, a 24 inch slated globe, trigonometer, and valuable books of reference.



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**ASTRONOMY, GEOLOGY, AND PHYSICS.**

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GEO. W. MILES, PROFESSOR.

*Astronomy*—This subject will be taught to the senior students of *all* courses for one term, and to the senior students of the Civil Engineering and Scientific courses for the entire year; and will consist of a practical treatment of Descriptive and Mathematical Astronomy, and practical work with the use of the instruments and material at hand. This department has a portable five inch telescope, star lantern with slides, star atlas, a planisphere, many valuable books of reference, and several periodicals. In connection with astronomy, some attention will be given also to the study of Meteorology which will be useful to the every day practical observer.

*Geology and Mineralogy*.—There are two terms devoted to the subject of Geology, and one term to Mineralogy; the first term of the Senior year will be given to Mineralogy. The second term, to Dynamical Geology; and the third, to Historical Geology and Paleontology. The work in the Mineral department has the benefit of a good cabinet corresponding to the academic list in Dana's Manual.

*Physics*.—This subject is required of all regular students of the Sophomore year in all courses. There is a good supply of apparatus for both class room work and individual laboratory practice, and special attention will be given to the practical illustration and application of the principles taught in the class room.

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**LOGIC.**

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C. T. JORDAN, PROFESSOR.

*Logic*.—The systematic study of logic, both inductive and deductive, is pursued as an aid to correct reasoning. Great prominence is given to methods for exact observation and experiment and correct principles of classification.

Instruction is by means of lectures and text-books.

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## HISTORY AND POLITICAL SCIENCE.

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JOHN P. OWEN, PROFESSOR.

*History*.—U. S. History is completed in the Sub-Freshman Department, as is also a short course in the elements of Civil Government. Ancient History is studied by all students in the first term of the Freshman year; Mediaeval and Modern History, by all in the second term of the same year. English history will be studied by the students of the Scientific course in the first term of the Sophomore year. The subject of Recent History is optional with surveying for the women of the Scientific course in the second term of the Sophomore year.

A term of Historical Reading is given to the women in the second term of the Freshman year. This reading will be made supplementary to the work in Modern History.

In the study of history the aim is not so much to memorize facts, as to understand them. As far as practicable the "Seminary" plan will be used, the object being to train the student to think for himself and to lead him to consult *Historical Sources*.

In general history, Fisher's History is used as the text-book; in English history, Montgomery's, supplemented by Green's History of the English People. Although text-books are used, the instruction is largely supplemented by readings and lectures.

One of the objects of this course is to inculcate in the student a love for the study of history, and to teach him to form his own conclusions from the facts presented.

The library to which students have access contains a very fair amount of first-class historical literature, which covers well the general field of history. Students in all history courses will be required to prepare three papers each term on subjects assigned. An excellent set of historical maps has been added to this department.

*Political Science*.—The elements of Civil Government having been studied in the Sub-Freshman class, Constitutional and

Political History is taught to the students of the Scientific and Agricultural courses, in the third term of the Sophomore year. Johnston's American Politics and Constitution of the United States, and Burgess's Political Science are the textbooks used. Cooley's Principles of Constitutional Law is studied by the Juniors of the Scientific and Agricultural courses.

*Political Economy.*—This subject is pursued during the first term of the Junior year. Instruction will be given by means of recitations and lectures.

The current practical problems of industrial society are also discussed on the basis of economic principles. Each student will be required to prepare an original paper upon some topic which will be assigned him.

The present industrial and financial embarrassment shows the importance of a knowledge of economic principles. The relations of capital to labor, the tariff, *Bi-Metallism*, banking, and other important questions relating to the welfare of our nation, are carefully studied and discussed.

Ely's Political Economy is used as a basis, but the students are required to read extracts from a number of standard authors, among whom are Adam Smith, Fawcett, Walker, Thompson, Bowen, Wayland, Perry, Laveleye, and Mill.

*History of Civilization.*—The Seniors of the Scientific course are required to take this subject three times a week in the second term. Guizot's Lectures will be used as a guide. A considerable range of literature will be referred to, and essays on various topics required.

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## ENGLISH AND LATIN.

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W. W. ROBERTSON, PROFESSOR.

*English.*—Sub-Freshman Class.—Having completed the work of the Preparatory Department, students take up Adv. English Grammar, and review carefully the Parts of Speech, after which the principles of Syntax are mastered. Careful attention is given to the study of the Participle, of the

Infinitive, and of Elliptical Constructions. Selections from the prose of Addison, Macaulay, Scott, and Dickens, and from the poetry of Longfellow, Byron, Keats, and Shelley, are assigned for written analysis. Rhetoric is begun, and the principles studied are applied in frequent written exercises, which are corrected, discussed before the class, and returned. Parallel reading: "Robinson Crusoe" (DeFoe), and "Legend of Sleepy Hollow" (Irving).

(Class meets five times a week throughout session.)

Freshman Class.—1st Term.—Lockwood's Lessons in English. Analysis is continued, taking up the more difficult constructions. Frequent written exercises are required. These exercises consist of dictations, reproductions, and carefully prepared compositions. Clear thought and correct expression are sought. Parallel reading: "Roger de Coverley" (Addison), and Franklin's Autobiography.

2nd Term.—Lockwood's Lessons in English. The work of this term is similar to the work of the first term. Parallel reading: "Lady of the Lake" (Scott), and "The House of Seven Gables" (Hawthorne).

3rd Term.—Newcomer's Composition. The work of this term is devoted to practical work in Composition, and careful attention is given to the development of style. Narration and Description receive special attention. Parallel reading: "Cricket on the Hearth" (Dickens), and "Marmion" (Scott). In the Scientific Course, the young ladies take Literary Reading as a practice, five times a week, while the young men take Blacksmithing. The selections to be read are as follows: Studies in Bryant, "In Memoriam" (Tennyson), "Christmas Carol" (Dickens), "Deserted Village" (Goldsmith), "The Vision of Sir Launfal" (Lowell), and Lamb's Tales from Shakespeare.

(Class meets three times a week during first and second terms, and twice a week during third term.)

Sophomore Class.—1st Term.—Newcomer's Composition; Genung's Rhetoric. Special attention to Exposition, Argumentation, and Persuasion. In all of the written work, which

constitutes an important part of the course, clearness of ideas and ease of expression are made the standards of criticism. Parallel reading: "Silas Marner", and Byron's "Prisoner of Chillon."

2nd Term.—Bain's Higher English Grammar is carefully studied. Students are required to write ten complete compositions on subjects assigned. Parallel reading: Ten of Macaulay's Essays.

(Class meets five times a week during first term, and four times a week during second term.)

Jr. Class.—1st Term.—Townsend's Art of Speech, vol. I. and vol. II. Seven complete compositions, on subjects which have been previously discussed in class, are required; also, three original papers on subjects assigned. Parallel reading: "Ivanhoe" (Scott), "David Copperfield" (Dickens), and "Rasselas" (Johnson). The students of the Scientific Course take American Literature as a practice, seven hours a week.

(Class meets three times a week.)

2nd Term.—The Students in the Agricultural and Scientific Courses take English Literature five times a week. The composition work of this term is similar to that of the first term. Parallel reading: "Childe Harold" (Byron), and "Adam Bede" (Eliot).

3rd Term.—Special attention is given to the analysis of at least two of Shakspeare's plays. The composition work is similar to that of the first term. Parallel reading: Ten of Emerson's Essays.

(Class meets three times a week.)

Sr. Class.—2nd Term.—Morris's Historical English Grammar; Lounsbury's History of the English Language. In this class, the historical study of the English Language is taken up. Attention is given to grammatical forms and constructions. The logical connections are contrasted with the idiomatic peculiarities of the language. Outlines and summaries are prepared, and the students are exercised in taking notes during lectures. Five compositions and three essays, on subjects assigned, are required.

(Class meets three times a week.)



3rd Term.—Class meets once a week for the purpose of receiving special instruction and criticism on orations.

Rhetorical Exercises.—All College students are required to appear in public each term.

Useful for reference: Phillips' English Literature; Ward's English Poets; Gosse's Literature of the Eighteenth Century; Stedman's Victorian Poets; and Minto's Manual of English Prose.

*Latin*.—This is regarded as a foundation study for mental discipline, and is most carefully taught. The subjects embraced in this department are the Latin Language and Literature, Roman History, and Mythology. The Roman pronunciation is used. In the Freshman Class, students are expected to acquire a thorough knowledge of the declensions, of the conjugations, and of the elements of Latin syntax. Daily exercises are given in translating Latin into English, and English into Latin. As the students advance, they are drilled in the analysis of the texts read. The classes recite five times a week.

Freshman Class.—Tuell and Fowler's Latin Grammar completed; Bingham's Latin Grammar.

Sophomore Class.—Kelsey's Caesar, Allen and Greenough's Latin Grammar, and Allen's Prose Composition.

Jr. Class.—1st Term.—Sallust, Allen and Greenough's Grammar, Prose Composition, and Roman History.

2nd Term.—Cicero's Orations, Allen and Greenough's Grammar, and Prose Composition.

3rd Term.—Two books of Virgil's Aeneid, Allen and Greenough's Grammar, and Prose Composition. Lectures on Roman Literature, Mythology, and on Latin Metres.

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### SPANISH.

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IDA M. JONES, PROFESSOR.

As may be seen from the courses of study, Spanish is optional with Latin in all the courses throughout the Freshman and Sophomore years, and in the Junior year in the Scientific course, it is made optional with higher mathematics.



In view of the fact that 30,000,000 people in the Western hemisphere speak Spanish, and that it is the language of commerce of all the people south of the Rio Grande, it has been thought best to provide an opportunity for our students to acquire this language.

Situated, as this College is, near the border of the Republic of Mexico, with this tongue in common use among the majority of our people, the opportunity here afforded to acquire a working knowledge of this language, next to English the most useful for Americans, is certainly excellent, and should be improved by all who expect to enter upon any field of labor among the Spanish-speaking people. An additional reason for the study of Spanish is that the Mexican Government is about to establish a system of public schools in every part of the Republic, thus giving employment to a great many teachers, many of whom must come from the United States; but they must be good Spanish scholars. In the time allotted to this study, a fair knowledge of the language may be obtained.

The elements of the language are acquired by the study of De Torno's Combined Method with Worman's First and Second Books. Conversation and sight reading will be given twice a week with additional work in dictation.

The work in the Sophomore year will consist of translations of Cortena's Amparo, oral and written translations of English selections of various styles, Spanish idioms, and the study of Knapp's Grammar.

In the Junior year the students will be required to do private reading in the course from Cervantes, Calderon, Moratin, and others. Translations of Moratin's comedy, *El si de las Niñas*, selections from *Don Quixote* and *Gil Blas*, the writing of business letters, and the study of Spanish literature will be included in this year's work.

The following books of reference are accessible to the students: Sales' Grammar, Becker's Spanish Idioms, Ticknor's History of Spanish Literature.

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## ELOCUTION AND PHYSICAL CULTURE.

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ELLEN F. GIBSON, INSTRUCTOR.

The ability to read well is no slight accomplishment, and can only be acquired by persevering effort, under the careful guidance of a skillful teacher. Systematic and thorough instruction will be given in reading, particular attention being paid to Articulation, Inflection, and Emphasis.

Voice culture will include tone development and projection. As to the thoroughness of this training there can be no doubt, as students who have received one year's careful drill from the Instructor, and who have natural talent for Elocution, are received as Seniors in the Boston College of Oratory.

The Physical Culture will include the Delsarte System of Physical Culture and Gesture, as well as the Swedish System of Gymnastics and Free Gymnastics; and is designed to develop gracefulness of carriage, ease of appearance in public, freedom of movement, as well as greater bodily vigor, and better health.

Lessons in Physical Culture will be given daily, and Elocution lessons once every week throughout the course.

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## MUSIC.

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Superior arrangements will be made so that all students who desire to take either instrumental or vocal music can do so in a department, distinct from the College as to the payment of fees, but under such rules and regulations as the Faculty may make. Instrumental music will be confined to the piano and organ, and the teaching will be of very high order. Fees for music will be about what are usually paid in good schools. In no case will they be excessive.

## BUSINESS DEPARTMENT.

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In view of the facts that there are no schools in southern New Mexico that furnish thorough and complete commercial courses, that the demand for such instruction is great and increasing, and that such training is of the most useful and practical character, the Board of Regents has established a Business Department in this College. In order that this department may not interfere with the regular college work, it is thought best to make it separate and distinct, to require a certain standard of admission, and to have definite courses of study. This department includes two courses, each complete in itself; namely, Course in Stenography and Typewriting, and Course in Bookkeeping.

It is not the design of the Business Department to attempt to fit students for stenographers and bookkeepers, in the shortest possible time; or to use all of the time of the student for purely technical instruction and practice. The demand at the present time is for well educated, thoroughly qualified stenographers and bookkeepers. It should be distinctly understood that this institution offers no inducements to those who are determined to enter upon any of these lines of work, without stopping to lay the foundation of a good general education. Experience will show that persons of limited education, if able to secure situations at all, invariably fall into the lowest class of workers, and are worth little to those who employ them; while the services of those who are carefully trained and well educated, are sought and liberally paid for.

Students will not be permitted to devote themselves exclusively to stenography or bookkeeping, who cannot show to the satisfaction of the Faculty that they have completed in a satis-

factory manner, in some school of known thoroughness, the additional studies named in that Business Course they are pursuing.

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#### FEEs.

The following are the fees in the Business Department:

Entrance Fee	-	-	-	-	-	-	-	-	\$ 5. 00
Deposit for care of books, etc.	-	-	-	-	-	-	-	-	2. 50

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#### REQUIREMENTS FOR ADMISSION.

To begin the course in stenography the student must be sixteen years of age, and must have completed all the work of the Sub-Freshman Class of this college. Students who have completed the work of the Sub-Freshman class and graduates of any commissioned high school in the Territory, will be admitted to this course without examination. All other students will be examined.

To begin the course in bookkeeping the student must be fifteen years of age, and must have completed arithmetic, grammar, Geography and U. S. History, and should be able to read and spell well. Students who have completed this work in the Preparatory department of the college, will be admitted without examination; also those students who can produce a certificate from the principal of any commissioned high school or graded school in the Territory that the above named branches have been completed satisfactorily. All other students will be examined.

It is believed that these courses offer much for those who wish this kind of training. All students of the Business Department enjoy the same library privileges as the college students.

## COURSES OF STUDY IN BUSINESS DEPARTMENT.

STENOGRAPHY & TYPEWRITING.		BOOKKEEPING.			
First Term.	Spanish or English.....	5	Commercial Arithmetic.....	5	
	Stenography.....	5	Grammar.....	5	
	Penmanship.....	5	Bookkeeping.....	5	
			Penmanship.....	5	
Second Term.	Spanish or English.....	5	Commercial Arithmetic.....	5	
	Stenography.....	5	Grammar.....	5	
	Speling.....	5	Bookkeeping.....	5	
			Spelling.....	5	
Third Term.	Spanish or English.....	5	Commercial Law.....	5	
	Stenography.....	5	Grammar.....	5	
	Office Work.....	5	Bookkeeping.....	5	
			Spelling.....	5	
			Rapid Calculation.....	5	
	PRACTICE.—Stenography, each term,...	5	PRACTICE.—Bookkeeping, each term,...		10
	Typewriting.. ..	5			

Upon completion of either of the courses a Certificate will be given.

## STENOGRAPHY AND TYPEWRITING.

F. E. LESTER, INSTRUCTOR.

The principal object of the course in Stenography and Typewriting is to thoroughly qualify the student to become a practical shorthand and typewriting amanuensis, so that at the completion of the course he may be prepared to accept a position as such. Naturally, the larger portion of the time of the student pursuing this course is devoted to stenography and typewriting. In all three terms, two hours a day are devoted to stenography and one to typewriting, and in the third term one hour a day, is devoted to office work. The remaining studies pursued in this course are such as to strengthen the student in those subjects which are more or less necessary to the competent



stenographer, and together call for about two hours a day additional to the work in stenography and typewriting. They comprise English or Spanish, Penmanship, and Spelling.

A strong and commendable feature of this course is the provision made for the study of the Spanish language. This may be followed throughout the whole year, devoting one hour a day to the subject. The experience of the past three years has shown that the demand for Spanish speaking stenographers is greater than the supply, and every student who has successfully completed the course in stenography and has also been a master of the Spanish language has without difficulty secured a desirable position. Furthermore, in every case the student has found no difficulty in adapting his knowledge of shorthand for use in taking Spanish dictation. The instruction in Spanish is given by a competent teacher, and the work is thorough and specially adapted to commercial use. Where the student does not take the work in Spanish, provision is made for devoting the time to the study of English.

A good English education is an absolute necessity to the student in shorthand; without it he can never succeed. It is the foundation upon which all his stenographic acquirements rest. Too much stress can not be laid upon this fact, for it is probable that in the great majority of cases, the all-too-common incompetent stenographer of to-day fails because of imperfect preparation for his work and a deficient general education. It is, therefore, required of all students entering the course that they shall have completed the work in the Sub-Freshman Department, or its equivalent. Almost of equal importance is the necessity for thoroughness in the work done, and this is made a strong feature throughout. Superficial work in shorthand is nothing less than a waste of time, and it will not be allowed.

It will be seen that this course is one calling for a good preparation and an unusual capacity for hard work, and the student who wishes to enter this course must be able to fill both of these requirements. The average student can not become a



proficient amanuensis in less than the nine months required in the course.

*Shorthand.*—Much care has been taken in the selection of what is thought to be the best system of shorthand available, for the success of the shorthand student depends largely upon his faith in the system he studies. The superiority of Graham's Standard Phonography, which is the system taught, has been proved conclusively by recent investigations, which have revealed the fact that more than 50 per cent of the official court reporters in the United States are Graham writers. The text-book used is the new edition of Graham's Handbook, supplemented by other works.

The work of the year's course is divided into three parts. The first term is devoted to the elementary grade—a study of the principles of shorthand; the second term, to the intermediate grade—covering word-signs and drill in correct outlines; and the third term, to the advanced grade, in which the student confines himself largely to dictation in business correspondence, literary and general matter. Particular attention is given to correct business forms, commercial expressions, and legal matter, and to careful training in the best outlines, by which alone a high rate of speed can be attained.

*Typewriting.*—The requirements of modern business demand only the expert typewriter operator, and the work of this course is such as to qualify the student to become such. The four-finger method is taught, and a complete text-book—Torrey's Practical Typewriting—studied in connection therewith. The practical work includes fingering, touch, copying, letter writing, legal and commercial forms, spelling and punctuation, writing from dictation, mechanism and care of the machine, speed exercises, and transcription from shorthand notes. In the third term, one hour a day is devoted to office work, which includes thorough practice in letter-press copying, indexing and filing of names and letters, carbon and hektograph duplicating work, and mimeographing.

The department is equipped with the best machines. Four New Model No. 6 Remington machines, one No. 2 Remington,

and one New Model Smith Premier, comprise the equipment. Every student is given thorough drill on both the single and double keyboard machines.

*Positions.*—No guarantee is given to any student entering this course that he will secure a position upon its completion. There is little doubt, however, of any student satisfactorily completing the course being able to secure a position. Every student who has satisfactorily completed the course in the past, and whose general education has been good, has secured a position.

A Certificate is given to students satisfactorily completing the course and passing an examination, the requirements of which are to be able to take from dictation ordinary business letters at the rate of 100 words per minute and transcribe the same from notes correctly on the typewriter at a minimum speed of 25 words per minute.

A small charge is made at the close of the year for material used by the student in his office work.

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### BOOKKEEPING.

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JOSEPH F. BENNETT, INSTRUCTOR.

It is not the aim to find in how short a time the student may be fitted for the duties of the counting room, but rather to train and equip him in such a manner that he may be able to meet the exacting demands and to perform the duties of accounting in modern commercial life. Thoroughness, practical and systematic work, and rigid inspection and examination of books, letters, and papers relating thereto will characterize the work. Under no circumstances will work be passed and credited unless it is strictly up to the standard required. Both double and single entry will be taught.

In theoretical bookkeeping the student is made familiar with the first principles of the science of bookkeeping. He is guided carefully until he can master the simpler forms of the day book, journal, cashbook, and ledger, and can post and close

a ledger correctly. Frequent exercises and class drills are given in journalizing and closing ledgers. Thus the student will gradually be required to master all forms and sets of books in the various lines of business, embracing single partnership, co-partnership, joint stock companies, corporations, etc.

Theory and Actual Business Practice will be so proportioned and combined as to produce the best practical results. Lectures and exercises will be given throughout the course on opening and closing books, auditing books, and higher accounting.

*Penmanship.*—The primary object of writing is, that it may be easily read. Next in order to legibility is rapidity. Business writing is taught in an interesting and systematic manner. The latest and most approved methods and systems will be used. No one branch of study in the Bookkeeping course is comparatively of greater importance than penmanship.

The advantages of a good hand-writing are many. It is one of the best recommendations in securing positions.

*Commercial Arithmetic.*—This subject will be taught throughout the Bookkeeping course. Mathematical accuracy, rapidity, and efficiency in the counting-room are absolute requisites in our present business life. Those processes, commonly called "lightning calculations" will be taught and practiced throughout the work.

*Commercial Law.*—All young men and women should be familiar with commercial law. The work will be carried on by lectures and recitations. The purpose is to give a clear insight into the laws governing business transactions so that the student may be enabled to distinguish between legal and illegal contracts; may learn how to draw up various legal documents; may know the laws of negotiable paper, agency, partnership, corporations, joint-stock companies, real estate conveyances, interest guaranty, insurance, shipping, etc.

*Spelling.*—Special attention is given to the subject of spelling. This branch is of great importance to all, and especially so to those contemplating commercial pursuits.

Regular work will be carried on in this branch throughout the Bookkeeping course. Commercial terms will be one of the features.

*Grammar and Letter Writing.*—Careful instruction will be given throughout the year in grammar and letter writing to the students of this course. The end to be attained is the easy and correct use of English, which is a most important element in education and one too frequently overlooked by those seeking commercial training.

## COLLEGE SOCIETIES.

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### COLUMBIAN.

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This society was organized October 25th, 1891, under the name of Alpha Chi. In 1892 this was changed to Columbian, and under this name the society has made steady and prosperous growth. Until about the middle of 1894-95 only male students were admitted as members, but since that time the young ladies have had equal membership privileges. The object of the society is to promote and encourage conscientious and practical literary work by discussions, papers, debates, and such other exercises as the committee on programmes may prescribe. The requirements for admission to the society are that applicants must be students of good standing in the College. They must also pay an entrance fee of one dollar, and dues of fifty cents each succeeding term. Regular meetings are held each week.

#### Officers:

E. E. Casey	- - - - -	President.
C. T. Thompson	- - - - -	Vice President.
Helen Macgregor	- - - - -	Rec. Secretary.
D. Casad	- - - - -	Cor. Secretary.
F. Garcia	- - - - -	Treasurer.
Elizabeth Wickham	- - - - -	Librarian.
A. M. Holt	- - - - -	Critic.
Ellen F. Gibson *	- - - - -	Vice Critic.
R. C. Bailey	- - - - -	Marshal.

The *New Mexico Collegian* is published and managed by the Columbian Literary Society. It was founded in February, 1893, and has been published regularly since that time, and has

\* Resigned.

issued four excellent Commencement numbers. It is an eight to twelve page journal and contains frequent contributions from students, besides the usual matter found in college publications. It is issued about the first of each month during the collegiate year, and has a good circulation throughout the Territory, and one which is constantly increasing.

The interest of students in the journal has grown considerably since it was founded, and it appears to be especially valued by those who leave college, serving as it does to keep them in close touch with the institution and with their college friends. The *Collegian* is now self-supporting, and has every prospect of being a successful journal. It will be enlarged and improved in the future as the support given it may warrant. All work in connection with its publication is entirely gratuitous. The subscription price is one dollar a year.

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#### P. S. AND W. E. SOCIETY.

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This society was organized at the beginning of the present session by some young ladies of the Freshman class, and the membership was originally drawn exclusively from that class; later a few others were admitted by special vote. The object is general improvement and the cultivation of a true college spirit. The exercises consist of debates, essays, recitations, readings, book-reviews, and general topics.

The following are the officers:

Mary Wickham	- - - - -	President.
Blanche Bailey	- - - - -	Vice President.
Minnie Newberry	- - - - -	Secretary.
Vivette Davis	- - - - -	Critic.
Lizzie Coleman	- - - - -	Marshal.

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#### ATHLETIC ASSOCIATION.

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The growth of the Athletic Association has more than kept pace with the College. The number of members was greatly



increased over that of last year. So far, football, baseball, and tennis have been made the principal college sports.

The Fifth Annual Field Day was held on May 7th. The programme consisted of the principal sports, which were very hotly contested. Gold medals were awarded to the winners in the different events. The officers for 1896-7 are as follows:

A. M. Holt	- - - - -	President.
E. E. Casey	- - - - -	Rec. Secretary.
Chas. Mead	- - - - -	Treasurer.
E. J. Coe	-- -- -- -- --	M'g'r Gymnasium.
E. B. Holt	-- -- -- -- --	M'g'r Football.
J. D. Tinsley	- - - - -	M'g'r Field Day.
H. Stanley	- - - -- -- --	M'g'r Tennis.
D. C. Ames	-- -- -- -- --	M'g'r Base ball.

Executive Board: A. M. Holt, E. B. Holt, Chas. Mead, E. J. Coe, E. E. Casey, D. C. Ames, J. D. Tinsley, and H. Stanley. .

## GENERAL INFORMATION.

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The College of Agriculture and Mechanic Arts offers a great deal to the young people of New Mexico. Every effort will be made to acquaint the people of the whole Territory with its purpose and work. Its courses of study are now equal to those of similar colleges in almost any of the older states. Students can now get a practical education here in any line they may desire. New schools usually make greater efforts than the older ones, and the energy put forth and the instruction given are often superior. There are a great number of students sent from various parts of the Territory each year to eastern colleges. We ask parents who do this, to investigate this college; and we believe if they will do so, it will get a share of their patronage, and that our people will manifest, in an increasing degree, their appreciation of the bounty of the United States and of the Territory here dispensed. We know it is better fitted to do good work than some of the eastern schools patronized by our people.

The postoffice of the college is Mesilla Park, N. M. Mesilla Park is also the general freight and express office of the college.

Strangers will find it more convenient to stop at Las Cruces, and go temporarily to some hotel. They should then report to the president, who will assist them in finding a boarding place.

Students should be on hand the first day of the term. The necessity of this is too seldom realized. New students and those desiring re-examination should report on the day named for this work.

### TEXT-BOOKS.

Text-books are furnished by the college. They will either be sold to the student at cost, or they will be lent. Students are required to deposit \$2.50 in advance, to secure the proper

care of college property and the prompt return of books borrowed. At the close of the year, or when the student withdraws, this deposit is returned unless damage has been done to the books or other college property. When this is the case the damage is assessed against the student, and any balance remaining of his deposit returned.

This deposit may be increased with students who are notoriously careless. Students who are able should purchase their books. Many of them will be needed after leaving school and they can be made to form the nucleus of a library, which every student should be encouraged to collect.

#### STATIONERY.

As the college is distant about two miles from any store dealing in stationery, it has been found necessary for the accommodation of students, to carry at the college a small line of articles, such as paper, pencils, pens, etc., which are sold to students, for cash only, at a small profit.

#### FEES.

Entrance fee, each year, for all students	- - - - -	\$ 5 00
Deposit fee    "    "    "    "    "	- - - - -	2 50
Students in Chemistry, deposit	- - - - -	5 00
Students in Engineering, deposit	- - - - -	5 00
Students using horse stalls, per term	- - - - -	25
Students not citizens of the U. S., per term	- - - - -	8 50

All fees must be paid in advance.

#### BOARDING AND OTHER EXPENSES.

We hear much said these times as to the cost of education. Many parents would gladly give their children a college education if they felt able to do so. The cost of travel in a large territory is great, but this is offset by free text-books and practically free tuition. The cost of clothing is something; but students should be taught to dress inexpensively, yet neatly. Clothes cost a certain amount whether in school or at home. The cost of board at home is something, though this is seldom

taken into consideration. Students need but little pocket money and the social demands on all students are light. If young people whose parents are unable to assist them, really want a college education, they can find a way to secure it, though it be but a term at a time. There is a greater demand for labor in New Mexico than in the east; most kinds are better paid; and any young person with sufficient energy and ambition, can, in time, work his way through college.

As yet the college can do nothing toward furnishing board and rooms. Students, so far, have secured board and lodging in private families near the college at from \$16 to \$20 per month. Some students have taken rooms and boarded themselves at greatly reduced cost. In the west, where many boys have learned to cook, this plan has great advantages for those of limited means. A year's boarding by this plan, including room, should not exceed \$80; and yet the student can have plenty of good, substantial food, and a comfortable room. A number of students have boarded themselves for \$7.50 to \$8.00 per month during the past session. This included room rent. Only boys of good habits and character can be permitted to live together in these clubs. Boarding clubs may be formed by students, and this is often a very good plan. With careful management this plan will reduce the cost of board and lodging to about \$150.00 a year. Washing will cost each student from \$1.00 to \$2.00 per month. Students who propose to furnish their own rooms should provide for this before leaving home. The freight on such articles as will be needed and can usually be spared from home will be light. It is not economical either to rent or to buy.

As may be seen, a student can get through the year by self boarding for about \$80.00; can board in a club and get through the year on from \$150.00 to \$175.00; and can board in a private family and expend from \$200.00 to \$250.00, according to his taste and means. It should be understood that all students are entitled to equal privileges in this institution; and will be accorded the same treatment, no matter what their condition in life. We believe that expenses here, (where free text-books and almost free tuition are given,) will not run higher than in other

institutions of similar character. Within reach of the college building are houses for rent at reasonable prices. Many families have moved here and resided in these or on rented ranches in the vicinity in order to give their children an opportunity to attend college. Whenever parents can do this, it should be done, as perhaps no other plan is so satisfactory.

#### PAID LABOR.

There is a considerable amount of paid labor on the farm, in the shops, and in the laboratories, that can be performed by students; and the policy will be to give it to students rather than to others. Some students have been able to earn enough during the past year, to pay their expenses; but those doing so have had constant employment in some subordinate position. No student should come expecting constant employment, or without sufficient means to pay the greater part of his expenses. The college can not undertake to furnish work for all students who wish it, or need it, in anything like sufficient amount to pay expenses; and even if it could, the student's time is needed chiefly for study, recitation, and practice. Still many worthy and industrious students pay a considerable part of their expenses by labor, which is given to those who are most trustworthy and meritorious; and who are regular and punctual in attendance, and correct in deportment. This labor is paid for at the rate of from 10 cents to 20 cents per hour; but the Faculty reserves the right to limit the amount of work any student may do.

#### DISCIPLINE.

It should be impressed upon the youth of New Mexico that by the creation of the College of Agriculture and Mechanic Arts there has been provided for them the fullest and best opportunity to secure a practical education. Students who enjoy the advantages here offered, should be made to realize that to forfeit these privileges on account of their misuse or abuse is a matter of the most serious concern to them.

Students who enter this school are expected to be honest.



truthful, polite, attentive, and diligent. The authority exercised over them will be strict, yet at the same time reasonable and considerate. It should be understood that the college is for those students who are capable of a fair degree of self-control, and who come here to fit themselves for useful and honorable places in life. If, after a fair trial, the influence of any student is found to be detrimental to scholarship, morals, or good order, dismissal will follow. The following are strictly forbidden: 1st, The indulgence in the use of intoxicating liquors and the frequenting of questionable resorts. 2d, The use of tobacco in any form in or about the college buildings. 3d. All indecent behavior and profane language.

#### POLITICS.

It is the aim of the college to cultivate true patriotism and respect for the laws of the Territory and Nation and for all constituted authority. Students will be taught their rights as citizens, and their duties as such; and there, teaching of this character, will end.

#### RELIGION.

All students will be trained in the principles of morality, and to respect the teachings of religion; but no sectarian teachings will be tolerated in the college. Students will be encouraged to attend the various churches and Sunday schools. Entire freedom of choice is given the students in selecting the church they will attend. Services are held at the following churches every Sunday: Catholic, Presbyterian, Methodist, and Episcopal. At the Presbyterian church are held meetings of the Young People's Society of Christian Endeavor. With the Methodist church is connected the Epworth League. Many of the students attend the weekly meetings of these organizations and receive great benefit.

#### HOW TO WITHDRAW FROM THE COLLEGE.

If students have occasion to withdraw from the college, they should call on the President and make their arrangements



with him. He will see that their accounts are properly adjusted, proper records made of their work, whatever money may be due from their credit deposit refunded, and will so arrange their records that their manner of withdrawal shall not stand in the way of an honorable discharge.

*Students who leave without having satisfactorily adjusted all these matters will not be entitled to an honorable dismissal.*

#### EXAMINATIONS AND STANDING.

Examinations are held at the end of each term. Students must make a grade of 70 per cent in each subject. Failing to make this grade, students must report for re-examination on the day specified; failing then, they must take the subject with a subsequent class.

#### ATTENDANCE.

Students are expected to be punctual and regular in attendance. They will not be permitted to leave the college in term time without a leave of absence granted by the President or Faculty. Temporary leave of absence may be granted by the President or in his absence, by the Vice President.

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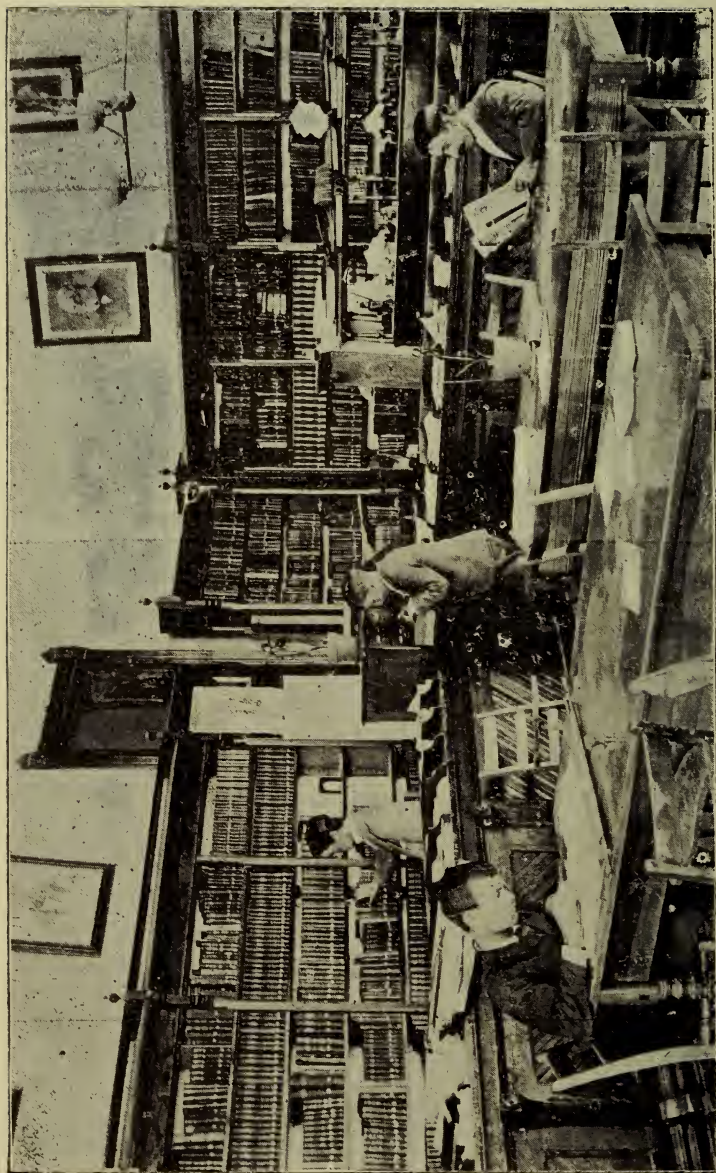
### THE COLLEGE OF AGRICULTURE AND MECHANIC ARTS AS A TEACHERS' TRAINING SCHOOL.

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The New Mexico College of Agriculture and Mechanic Arts does not desire to interfere in any way with those institutions of the Territory giving special attention to Normal work; but in-as-much as the Legislature has recently provided that the diplomas issued by this College to its graduates, shall be accepted as first-grade teachers certificates in any of the counties of the Territory, this College will offer unusual facilities for properly training teachers for the responsibilities of their profession.

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A CORNER OF THE LIBRARY.

## MATERIAL EQUIPMENT.

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### COLLEGE BUILDING.

The College building is a fine brick structure of two stories and basement. It is trimmed with stone and has a very heavy stone foundation. It is well built, nicely finished, and cost about \$25,000. It contains thirteen rooms all of which are furnished and in constant use. The building is heated throughout with hot air furnaces, and is well supplied with gas and water. In the basement are the chemical, botanical, and entomological laboratories, each fitted up with the best appliances. On the first floor are the president's office the mathematical department, the library, and the recitation rooms for stenography and typewriting, and bookkeeping. For lack of space, the library room is utilized for a study room for college students. On the second floor are the department of history and political science, the department of languages, and the Preparatory department of the college. On this floor is McFie hall capable of seating quite a large audience. It is in frequent use for public Class exercises, and other entertainments. On account of the lack of room, this hall is divided by movable partitions into three class rooms for the use of the Preparatory department.

The Library and Reading Room is commodious, and furnished in a tasteful manner. The library contains more than 3,000 volumes, to which additions are constantly being made. Each department is supplied with a technical library for daily use in the class room. The plan of Department libraries has been adopted as best calculated to increase the usefulness of the library by making it more accessible to students while engaged in special lines of work. The Reference library is quite extensive, containing encyclopedias, gazetteers, dictionaries, etc. The general library includes standard books on history, biography, travel, literature, art, science, and some of the best fiction.

In connection with the Library is a Reading Room, in which are found the following periodicals:—

Agricultural Science, American Agriculturist, American Journal of Mathematics, American Chemical Journal, American Machinist, American Naturalist, Analyst, Arena, Astrophysical Journal, Botanical Gazette, Bulletin Torrey Botanical Club, Business (Accountant's Ed.), Canadian Entomologist, Century, Chemical News, Cosmopolitan, Current History, Educational Review, Engineering News, Engineering Magazine, Entomological News, Erythia, Field and Farm (Denver), Forum, Gardening, Garden and Forest, Harper's Monthly Magazine, Harper's Weekly, Harper's Round Table, Irrigation Age, Journal American Chemical Society, Journal London Chemical Society, Journal Association Engineering Societies, Journal of Education, Journal New York Entomological Society, Journal of the Telegraph, Ladies' Home Journal (two copies), North American Review, Pacific Rural Press, Phonographic World, Popular Science Monthly, Popular Astronomy, Political Science Quarterly, Psyche, Review of Reviews, Rural New Yorker, Scientific American, Scientific American Supplement, Science, Scribner's Magazine, Stenographer, Transactions American Entomological Society, Werner's Voice Magazine, Youth's Companion (two copies).

The following Newspapers are furnished gratuitously by the publishers:—

The New Mexico Collegian (College Paper).

The Las Cruces Independent Democrat.

The Las Cruces Rio Grande Republican.

The Socorro Chieftain.

The Eddy Current.

The Roswell Register.

The Roswell Record.

The Farmington Times.

The New York Weekly Tribune.

The Baltimore Weekly Sun.

Students have access also to the following periodicals which are kindly furnished by the publishers to the Experiment Station Library in exchange for the Station Bulletins:—

Agriculturist, Minneapolis, Minn.



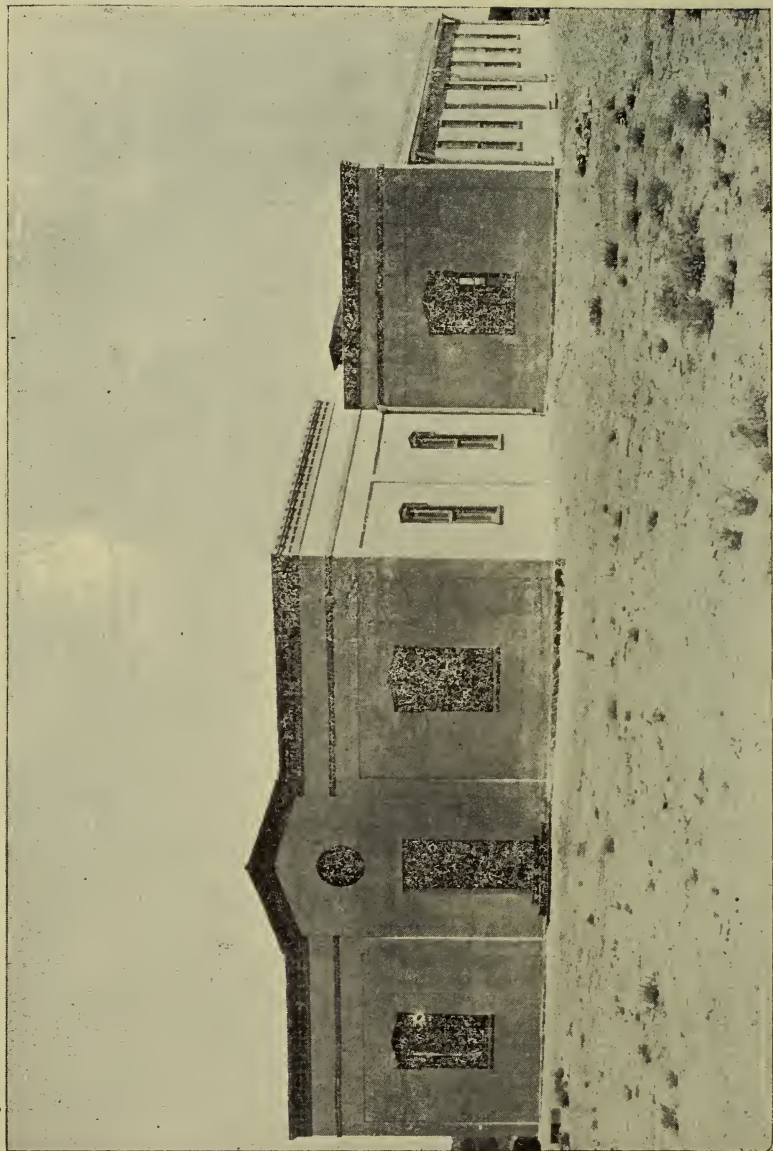
Agricultural Epitomist, Indianapolis, Ind.  
American Creamery, Chicago, Ill.  
American Cultivator, Boston, Mass.  
American Fertilizer, Philadelphia, Pa.  
American Grange Bulletin, Cincinnati, Ohio.  
American Horticulturist, Wichita, Kan.  
American Poultry Journal.  
American Sheep Breeder and Wool Grower, Chicago, Ill.  
American Swineherd, Chicago, Ill.  
Breeder's Gazette, Chicago, Ill.  
California Cultivator and Poultry Keeper, Los Angeles,  
California.  
Church and Farm, Salt Lake City, Utah.  
Country Sport, London, Eng.  
Creamery Journal, Waterloo, Iowa.  
Cultivator, Omaha, Neb.  
Dairy World, Chicago, Ill.  
Dakota Farmer, Aberdeen, S. D.  
Elgin Dairy Report, Elgin, Ill.  
Farmer's Call, Quincy, Ill.  
Farm, Field and Fireside, Chicago, Ill.  
Farm and Fireside, Springfield, O.  
Farmer's Guide, Huntington, Ind.  
Farmer and Breeder, Springfield, Ill.  
Farm and Home, Chicago, Ill.  
Farmer's Home, Dayton, Ohio.  
Farm Journal, Philadelphia, Pa.  
Farmer's Magazine, Springfield, Ill.  
Farm News, Springfield, Ohio.  
Farm and Orchard, Las Cruces, N. M.  
Farm Poultry, Boston, Mass.  
Farmer's Review, Chicago, Ill.  
Farm Reporter, Charleston, W. Va.  
Farm, Stock and Home, Minneapolis, Minn.  
Farming, Toronto, Canada.  
Grange Visitor, Lansing, Mich.  
Hoard's Dairyman, Fort Atkinson, Wis.



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Holstein Friesian Register, Brattleboro, Vt.  
Horticultural Gleaner, Austin, Texas.  
Homestead, Des Moines, Iowa.  
Industrial American, Lexington, Ky.  
Journal of Agriculture, St. Louis, Mo.  
Jersey Bulletin, Indianapolis, Ind.  
Kansas Farmer, Topeka, Kan.  
Louisiana Planter, New Orleans, La.  
Market Garden, Minneapolis, Minn.  
Midland Poultry Journal, Kansas City, Mo.  
Mirror and Farmer, Manchester, N. H.  
Montana Fruit Grower, Missoula, Mont.  
Nebraska Farmer, Lincoln, Neb.  
New England Florist.  
Northwestern Agriculturist, Minneapolis, Minn.  
Ohio Farmer, Cleveland, Ohio.  
Oregon Agriculturist, Portland, Oregon.  
Poultry Monthly, Albany, N. Y.  
Practical Farmer, Philadelphia, Pa.  
Prairie Farmer, Chicago, Ill.  
Progressive South, Richmond, Va.  
Public Ledger, Philadelphia, Pa.  
Rural Life, Waterloo, Va.  
Southern Cultivator, Atlanta, Ga.  
Southern Farmer, New Orleans, La.  
Southern States, Baltimore, Md.  
Stock Grower and Farmer, Las Vegas, N. M.  
Stockman and Farmer, Helena, Mont.  
Successful Farmer, Sioux Falls, S. D.  
Sugar Beet, Philadelphia, Pa.  
Texas Farm and Ranch, Dallas, Texas.  
Wallace's Farmer, Des Moines, Iowa.  
Western Agriculturist & Live Stock Journal, Quincy, Ill.  
Wisconsin Agriculturist, Racine, Wis.





NEW ENGINEERING BUILDING.

## ENGINEERING BUILDINGS.

These buildings, two in number, are located south of the main College Building. They comprise, besides two large recitation rooms and hall, commodious rooms for wood work, machine work, foundry, blacksmithing, and a 40 horse power steam plant. These buildings are well equipped for Engineering work. Physics, Astronomy, and Geology will also be taught in the main Engineering building.

## OTHER BUILDINGS.

Back of the college building are the feed rooms and horse sheds. These are for the accommodation of the horses of the students and professors. The charge for their use is 25 cents a term, which is sufficient to keep them cleaned and in order.

Below the college building is a pump house with engine and all other necessary machinery for pumping water from a system of six driven wells for the irrigation of the Campus, which is much higher than the ditches which irrigate the farm land. This plant cost about \$2,500.

An adobe Farm Building erected at a cost of about \$2,000 is located near the center of the farm. It consists of a residence for the assistant in agriculture and horticulture, and a large room for storing seeds, supplies, etc. The Greenhouse and the sheds for the storing of farm implements and machinery, are located near the farm building.

A contract has just been made for the erection of an Experiment Station Building and a girls' dormitory on the ground north of the main building. The Experiment Station Building will be built of brick trimmed with stone. It is designed to accommodate the chemical, botanical and entomological work of both the College and the Station. There will be thirteen rooms on the first floor and six on the second—all arranged with special reference to the work to be done in them. Gas, water and all other necessities are amply provided for and the laboratories in this building will be well equipped.

The girls' dormitory will have a commodious dining room, reception room, and well lighted and ventilated sleeping rooms.

# COLLEGE STUDENTS.

## POST GRADUATE.

Holt, Alfred Moss,       -       -       -       -       -       Las Cruces.

## SENIOR CLASS.

Bennett, Joseph Francis,       -       -       -       -       Mesilla.  
Holt, Elgin Bryce,       -       -       -       -       Las Cruces.  
Williams, Arthur Edwin,       -       -       -       -       Las Cruces.

## JUNIOR CLASS.

Casey, Edwin Eugene,       -       -       -       -       Las Cruces.  
Coe, Edward James, \*       -       -       -       -       Ft. Stanton.  
Cravens, Du Val Garland,       -       -       -       -       Ft. Smith, Ark.  
Mead, Charles Edward,       -       -       -       -       Victoria.  
Mead, Ivah Rebekah, \*       -       -       -       -       Victoria.  
Stanley, Isaac Henry,       -       -       -       -       Pinos Altos.  
Sweet, Lottie,       -       -       -       -       Mesilla Park.  
Williams, George Morgan,       -       -       -       -       Las Cruces.

## SOPHOMORE CLASS.

Broyles, Richard Franklin,       -       -       -       -       Las Cruces.  
Ford, Pinkie, \*       -       -       -       -       Las Cruces.  
Gilmore, Ula, \*       -       -       -       -       Ruidoso.  
Holt, Walter Edwin,       -       -       -       -       Las Cruces.  
Wickham, Anna, \*       -       -       -       -       Socorro,

## FRESHMAN CLASS.

Beall, Thomas D.,       -       -       -       -       El Paso, Tex.  
Caruthers, Ida,       -       -       -       -       Paradise, Tex.  
Coleman, Elizabeth, \*       -       -       -       -       Mesilla Park.  
Davis, Vivette, \*       -       -       -       -       El Paso, Tex.  
French, Fannie, \*       -       -       -       -       Las Cruces.  
Jacoby, Lydia, \*       -       -       -       -       Hatch.  
Morris, Lessie A.,       -       -       -       -       Upham.  
Newberry, Minnie, \*       -       -       -       -       Las Cruces.

\* Conditioned.

Owen, Jas. Edward, *	-	-	-	-	Mesilla Park.
Pierce, Allen Smith,	-	-	-	-	Eddy.
Post, Chas. L.,	-	-	-	-	Madrid.
Race, Edgar Albert, *	-	-	-	-	El Paso, Tex.
Thompson, Cayetano, *	-	-	-	-	Georgetown.
Wickham, Mary C., *	-	-	-	-	Socorro.
White, Alwood H.,	-	-	-	-	El Paso, Tex.

## SPECIAL STUDENTS.

Ames, David C.,	-	-	-	-	Las Cruces.
Burt, Edwin,	-	-	-	-	Mesilla.
Bean, James Edward,	-	-	-	-	Van Horn, Tex.
Campbell, Chas. George,	-	-	-	-	Deming.
Casey, John P. Jr.,	-	-	-	-	Las Cruces.
Climó, James,	-	-	-	-	Pinos Altos.
Coleman, Bertie,	-	-	-	-	Mesilla Park.
Cowan, Charles,	-	-	-	-	Las Cruces.
Etheridge, Annie,	-	-	-	-	Clint, Tex.
Loeser, Robert M.,	-	-	-	-	El Paso, Tex.
Loeser, Mrs. Robert M.,	-	-	-	-	El Paso, Tex.
Macgregor, Hellen M.,	-	-	-	-	Mesilla Park.
Peacock, Frederica,	-	-	-	-	Victoria.
Peacock, Viola,	-	-	-	-	Victoria.
Peckham, Alfred L.,	-	-	-	-	Brooklyn, N. Y.
Robertson, Annie Bell,	-	-	-	-	Las Cruces.
Robertson, Frances Gertrude,	-	-	-	-	Las Cruces.
Robertson, James E.,	-	-	-	-	Las Cruces.
Sutherland, W. A.,	-	-	-	-	Gallup.
Thomson, Edward,	-	-	-	-	Los Angeles, Cal.
Tenney, L. E.,	-	-	-	-	Boston, Mass.
Wenizirl, John,	-	-	-	-	Madison, Wis.
Wickham, Elizabeth,	-	-	-	-	Socorro.
Wood, Frank S.,†	-	-	-	-	Mesilla.

## SUB-FRESHMAN CLASS.

Alvarez, Lauro Canuto,	-	-	-	-	Anthony.
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\* Conditioned.

† Deceased.



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Bailey, Blanche,	-	-	-	-	-	Anthony.
Baird, William Wallace,	-	-	-	-	-	Las Cruces.
Brown, Carver Mark,	-	-	-	-	-	El Paso, Tex.
Casey, L. Garfield,	-	-	-	-	-	Las Cruces.
Ford, Fannie,	-	-	-	-	-	Las Cruces.
Gonzales, Pablo,	-	-	-	-	-	Las Cruces.
Jerrell, Henry,	-	-	-	-	-	Las Cruces.
Jones, Joseph J.,	-	-	-	-	-	Roswell.
Kezer, Roy Vernon,	-	-	-	-	-	Las Cruces.
Laird, Samuel,	-	-	-	-	-	Madrid.
Lowe, David Lawson,	-	-	-	-	-	Las Cruces.
Macgregor, Marie Justina,	-	-	-	-	-	Mesilla Park.
Macgregor, James Stanislaus,	-	-	-	-	-	Mesilla Park.
May, Ormeda,	-	-	-	-	-	Las Cruces.
McFie, Maud Eliza,	-	-	-	-	-	Las Cruces.
Mott, Rowena M.,	-	-	-	-	-	Las Cruces.
Newberry, Nora,	-	-	-	-	-	Las Cruces.
Newberry, Lily Maud,	-	-	-	-	-	Las Cruces.
Sanches, Alfredo,	-	-	-	-	-	Mesilla.
Steele, Matthew,	-	-	-	-	-	Las Cruces.
Stephens, Bert,	-	-	-	-	-	Pinos Altos.
Peake, Lottie,	-	-	-	-	-	Mesilla Park.
Winter, Edward Earnest,	-	-	-	-	-	Pueblo, Colo.

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### PREPARATORY STUDENTS.

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#### SECOND YEAR'S CLASS.

Ames, Henry,	-	-	-	-	-	Las Cruces.
Bowman Edith Mary,	-	-	-	-	-	Las Cruces.
Buquor, J. Oscar,	-	-	-	-	-	El Paso, Tex.
Carrera, Regina Mary,	-	-	-	-	-	Las Cruces.
Chavez, Elias,	-	-	-	-	-	Las Cruces.
Clarke, John Wesley,	-	-	-	-	-	Cliff.
Coleman, Ruth,	-	-	-	-	-	Mesilla Park.
Foster, Florence,	-	-	-	-	-	Mescalero.

Gamboa, George,	-	-	-	-	Mesilla.
Goddard, William Herbert,	-	-	-	-	Graham.
Gilmore, Matt,	-	-	-	-	Ruidoso.
Isaacks, Mary Caladonia,	-	-	-	-	Las Cruces.
Kezer, Grace Belle,	-	-	-	-	Las Cruces.
Lee, Donnie,	-	-	-	-	Las Cruces.
Luchini, Benj. A.,	-	-	-	-	Hatch.
Maxwell, Frank M. C.	-	-	-	-	Tularosa.
Mead, Victor Veil,	-	-	-	-	Victoria.
Moreno, Eugenio Enrique,	-	-	-	-	Telles.
Mossman, Walter Chauncey,	-	-	-	-	Mesilla.
Pelphry, William Hosea,	-	-	-	-	El Paso, Tex.
Potts, Rex,	-	-	-	-	Las Cruces
Reush, Guy F.,	-	-	-	-	Earlham.
Reush, Harry L.,	-	-	-	-	Earlham.
Rouault, Theodore Charles,	-	-	-	-	Las Cruces.
Scoggins, Mattie Ona,	-	-	-	-	Las Cruces.
Snow, Carl,	-	-	-	-	Victoria.

FIRST YEAR'S CLASS.

Bull, Charlie,	-	-	-	-	Mesilla.
Bowman, Ethel,	-	-	-	-	Las Cruces.
Casey, Clara Lilis,	-	-	-	-	Las Cruces.
Ford, Annice,	-	-	-	-	Las Cruces.
Fuller, Garfield A.,	-	-	-	-	El Paso, Tex.
Goodin, Burr,	-	-	-	-	Mesilla.
Isaacks, Willie Frederick,	-	-	-	-	Las Cruces.
Lockwood, Minerva,	-	-	-	-	Cripple Creek, Colo.
Mead, Herbert,	-	-	-	-	Victoria.
Newberry, Henry Clay,	-	-	-	-	Las Cruces.
Neal, Homer H.,	-	-	-	-	Mesilla Park.
Owen, Blanche E.,	-	-	-	-	Mesilla Park.
Phelps, Raymond Arthur,	-	-	-	-	Las Cruces.
Potts, Burt,	-	-	-	-	Las Cruces.
Ramirez, Rafael,	-	-	-	-	Mesilla.
Reush, Claude H.,	-	-	-	-	Earlham.
Rouault, Ernest Joe,	-	-	-	-	Las Cruces.

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Scoggins, Beulah,	-	-	-	Las Cruces.
Stuppie, Nic,	-	-	-	El Paso, Tex.
Wilson, Noah,	-	-	-	Mescalero.
Winter, Wm. Pelham,	-	-	-	Pueblo, Colo.

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### BUSINESS STUDENTS.

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#### STENOGRAPHY AND TYPEWRITING CLASS.

Bailey, Rolla C.,	-	-	-	Chamberino.
Coleman, James H.,*	-	-	-	Mesilla Park.
Etheridge, R. W. E.,	-	-	-	Clint, Tex.
French, Floy E.,	-	-	-	Las Cruces,
Hall, C. Belle,	-	-	-	Hachita.
Herron, Claude R.,*	-	-	-	Las Cruces.
Hinton, Arthur R.,	-	-	-	Washington, D.C.
Llewellyn, Clinton B.,†	-	-	-	Las Cruces.
McFie, Ralph E.	-	-	-	Las Cruces.
Newberry, Samuel H.†	-	-	-	Las Cruces.
Southlee, Thomas E.	-	-	-	Geronimo, Ariz.

#### BOOKKEEPING CLASS.

Baird, A. Eugene.	-	-	-	Las Cruces.
Bull, Thomas R.,	-	-	-	Mesilla.
Casad, Darwin,	-	-	-	Mesilla.
Foster, Mary,	-	-	-	Dwyer.
Greenwald, John O.,	-	-	-	Socorro.
Goodin, Monte H.	-	-	-	Mesilla Park.
Hendrick, Bernard C.,	-	-	-	Las Cruces.
Hood, A. Clark,	-	-	-	Nacona, Tex.
Jones, Joseph J.,	-	-	-	Roswell.
Julian, Charles,	-	-	-	El Paso, Tex.
Laird, Samuel,	-	-	-	Cerrillos,
Llewellyn, Morgan,	-	-	-	Las Cruces.
Newberry, Samuel H.,	-	-	-	Las Cruces.
Smith, Nathan C.,	-	-	-	Las Cruces.
Wayland, Edwin H.,	-	-	-	La Luz.

\* Left before the close of the year to accept positions.

† Withdrew from class early in the year.

TELEGRAPH CLASS.

French, Ralph E.,	-	-	-	Las Cruces.
Peacock, Daura V.,	-	-	-	Victoria.

SUMMARY.

Post Graduate,	-	-	1
Seniors,	-	-	3
Juniors,	-	-	8
Sophomores,	-	-	5
Freshmen,	-	-	15
Special Students,	-	-	24
Sub-Freshmen,	-	-	24
Stenography and Typewriting,			11
Bookkeeping,	-	-	15
Telegraphy,	-	-	2
Preparatory,	-	-	47
			155
Names repeated,	-		2
Total number of students,			153

# THE AGRICULTURAL EXPERIMENT STATION.

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BOARD OF CONTROL:

BOARD OF REGENTS OF THE COLLEGE.

---

THOMAS J. BULL, Mesilla. President.

DEMETRIO CHAVEZ, Mesilla, Secretary and Treasurer.

ROBERT BLACK, Silver City.

G. A. RICHARDSON, Roswell.

A. A. JONES, Las Vegas.

MIGUEL A. OTERO, Governor, Santa Fe, *Ex-Officio*.

PLACIDO SANDOVAL, Superintendent of Public Instruction,  
Santa Fe, *Ex Officio*.

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STATION STAFF, 1897-'98.

---

CORNELIUS T. JORDAN, A. M., Director.

ARTHUR GOSS, M. S., A. C., Chemist and Vice Director.

JOHN D. TINSLEY, Biologist.

T. D. A. COCKERELL, Entomologist.

GEORGE VESTAL, Agriculturist and Horticulturist.

R. FRED HARE, M. S., Assistant Chemist.

FABIAN GARCIA, B. S., Assistant to Agriculturist and  
Horticulturist.

ALFRED M. HOLT, M. S., Second Assistant Chemist.

CHARLES E. MEAD, Meteorological Observer.

FRANK E. LESTER, Clerk and Stenographer.

HARVEY H. GRIFFIN, B. S., Superintendent of San Juan  
Branch Experiment Station, Aztec.

F. O. KIHLEBERG, Superintendent of Las Vegas Branch  
Experiment Station, Las Vegas.



VIEW OF EXPERIMENTAL FARM FROM THE MAIN BUILDING.





## COLLEGE EXPERIMENT STATION.

By the Congressional Act of 1887, the Hatch Act, (see page 10,) a "Department" of Agricultural Colleges was endowed, having for its purpose the performing of experiments of value to Agriculture and Horticulture and the diffusing of valuable information among the people. The Territorial Act of Feb. 28, 1889, which established the New Mexico College of Agriculture and Mechanic Arts, established also an Experiment Station in connection with the college. This department is in successful operation.

The College Farm, which was donated to the Territory by the citizens of Doña Ana County, contains about 250 acres. Nearly 100 acres of this farm is good river bottom land, supplied with water from the Las Cruces Community ditch which crosses it. This tract is divided into eight plats, which are subdivided into plats of various sizes, from a square rod to an acre.

Plats I. and VIII. are in the old river bed, and are used at present for growing alfalfa for the farm stock.

Plat II. is used for experiments in wheat, rye, barley, broom corn, millets and other forage plants.

Plat III. contains the orchard and vineyard. The orchard contains 150 varieties of peaches, 90 of apples, 60 of pears, 50 of plums and prunes, 16 of cherries, 20 of apricots, 4 of nectarines, 5 of quinces, 6 of figs, etc. There are four trees of each variety, most of which are of bearing age. The vineyard contains 100 varieties of American and foreign grapes.

Plat IV. is planted to kaffir corn and millo maize.

Plat V. contains ten acres, and is used by the students for athletic grounds.

Plat VI. contains thirteen one acre plats of alfalfa for experiment purposes, one acre of cañaigre, a number of plats of oats, and a hog pasture. The farm buildings, including the new greenhouse, are located on this plat.

Plat VII. is devoted to experiments in peas, corn, tomatoes, peppers, clovers; grasses, sweet potatoes, and extensive experiments with sugar beets.

The remaining 150 acres is mesa land. Thirty acres were cleared for experimentation and for the location of the College Buildings. A part of this tract is irrigated with water raised from wells by steam power.

A great number of valuable horticultural and agricultural experiments are in process of testing, and more are being constantly begun. During a large portion of the year, students have opportunities to labor on this farm, thus enabling them to defray a considerable portion of their expenses. Besides this, they are under the direct guidance and instruction of an educated horticulturist and agriculturist of large experience. This alone is a valuable consideration.

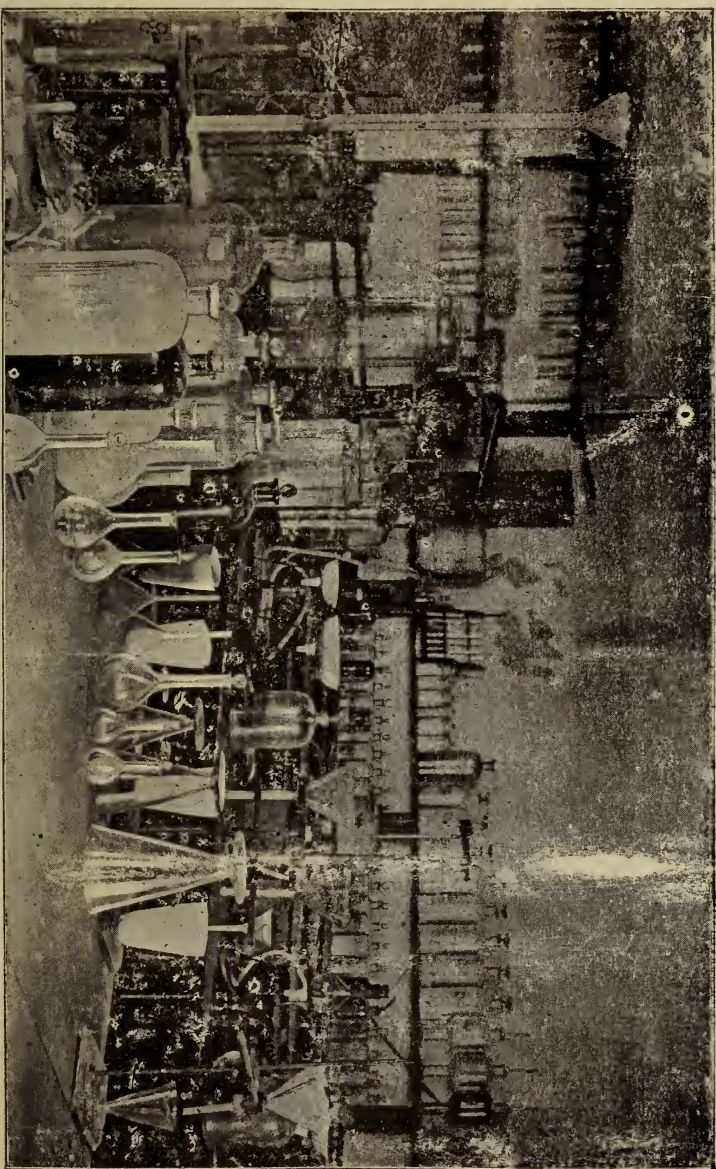
A meteorological station is maintained on the College Farm where a record of the daily observations of the weather is kept. The following standard instruments are in use: wind vane, rain gauge, self-registering anemometer, mercurial barometer, dry and wet bulb thermometers, maximum and minimum thermometers, soil thermometers, etc.

In the Chemical department much work has been done on irrigating waters, native forage plants, food of the native population, alkali, and various other subjects of special interest to the farmers of the Territory. Besides being of the highest importance to the Agricultural classes, this work affords the students an opportunity of seeing chemical processes practically applied. Numerous assays of ores and determinations of minerals are also made in this department, thus affording the students object lessons in this kind of work.

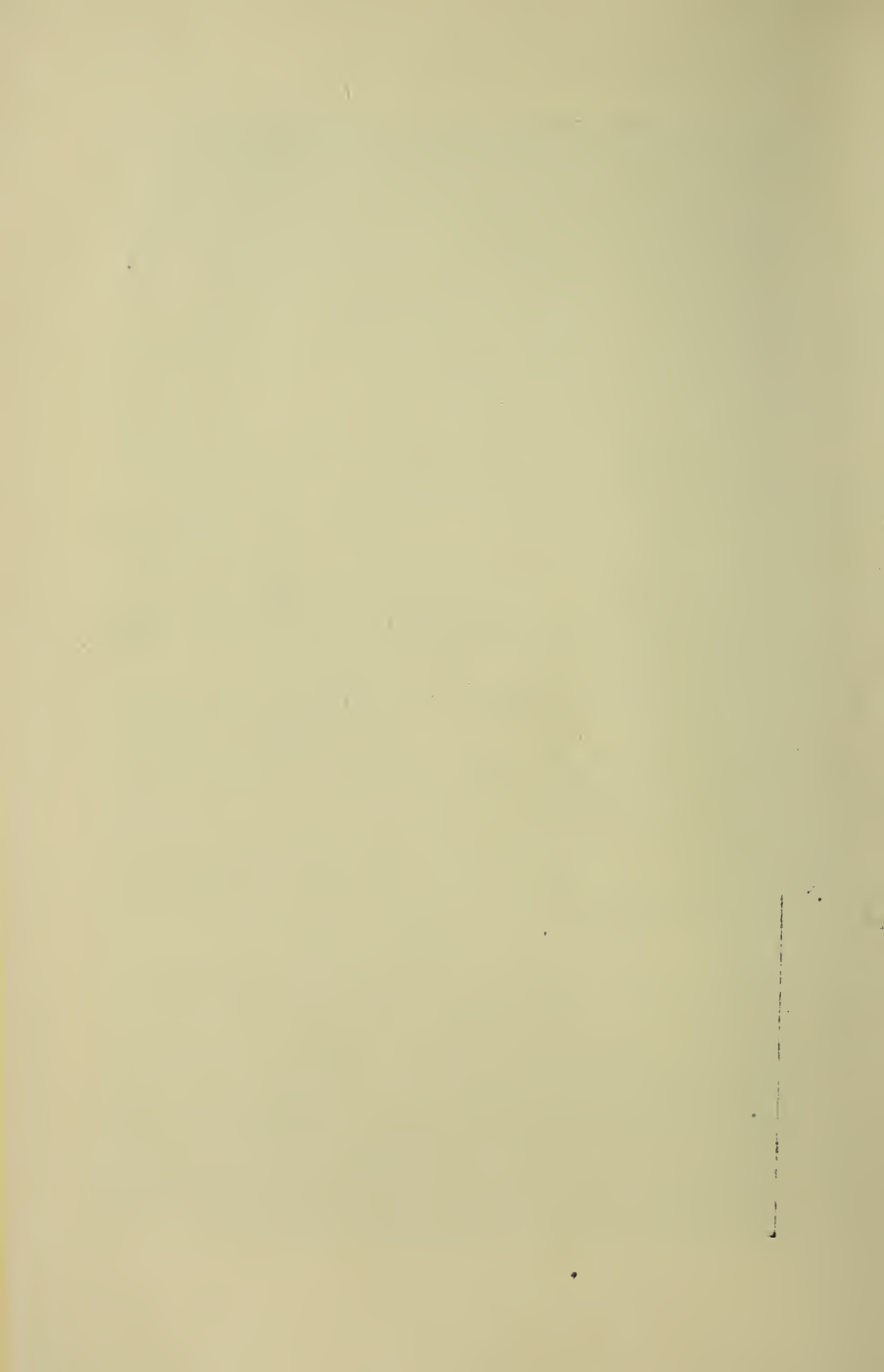
The Biological department is devoting its time and attention to a study of the native flora, and increasing the herbarium; to a study of injurious insects and methods of destroying them; and to plant physiology. The work will, in future, be principally in plant physiology and plant diseases. Prof. Cockerell is at present engaged in special work on the Codling Moth, and a study of the Life Zones in New Mexico.

We are always glad to correspond, with persons interested, in regard to injurious insects or plant diseases.

Twenty-three Bulletins have been issued on topics of in-



STATION CHEMICAL LABORATORY.





terest to farmers, and more are in preparation. Those already issued are the following:—

- No. 1. April, 1890—General Information.
- No. 2. Oct., 1890—Outline of Plans of Experimentation.
- No. 3. June, 1891—Preliminary Account of Some Insects Injurious to Fruit.—C. H. Tyler Townsend.
- No. 4. March, 1892—Fruit Trees, Forest and Shade Trees, Nut-Bearing Trees, and Vegetables.—A. E. Blount.
- No. 5. March, 1892—Notices of Importance Concerning Fruit Insects—C. H. Tyler Townsend.
- No. 6. March, 1892—Cereals, Forage Plants, Grasses, Clovers, Textile Plants, and Sorghums—A. E. Blount.
- No. 7. June, 1892—Scale Insects in New Mexico.—C. H. Tyler Townsend.
- No. 8. Nov., 1892—Wheat, Oats, Barley, Rye, Sugar Beets, Sorghum, Cañaigre, etc.—A. E. Blount.
- No. 9. May, 1893—Insecticides and their appliances.—C. H. Tyler Townsend.
- No. 10. Sept., 1893—Insects of 1893.—T. D. A. Cockerell.
- No. 11. Oct., 1893—Notes on Cañaigre and Meteorological Data.—A. E. Blount and Harvey H. Griffin.
- No. 12. Nov., 1893—The Value of Rio Grande Water for the Purpose of Irrigation.—Arthur Goss.
- No. 13. New Mexico Weeds, No. 1.—E. O. Wooton.
- No. 14. Cañaigre.—A. E. Blount.
- No. 15. Entomological Observations in 1894. Life Zones in New Mexico. Entomological Diary at Santa Fe.—T. D. A. Cockerell.
- No. 16. Sept., 1895—The Russian Thistle.—E. O. Wooton.
- No. 17. Dec, 1895—Principles of Stock Feeding and Some New Mexico Feeding Stuffs.—Arthur Goss.
- No. 18. March, 1896—Some New Mexico Forage Plants—E. O. Wooton.
- No. 19. April, 1896—Report of the Entomologist, (Part 1)—T. D. A. Cockerell.
- No. 20. December, 1896—Seeds.—George Vestal.
- No. 21. January, 1897—Results of Experiments at San Juan Sub-Station.—H. H. Griffin.



No. 22. March, 1897—Alkali in the Rio Grande and Animas valleys.—Arthur Goss and H. H. Griffin.

No. 23. April, 1897—Sugar Beets.—Cornelius T. Jordan.

Upon application Bulletins will be sent *free* to any address in the territory.

#### BRANCH EXPERIMENT STATIONS.

In February, 1893, the Thirtieth Legislative Assembly passed Acts creating Branch Experiment Stations.

The *first* is located near Aztec on a tract of 120 acres of irrigated land, donated to the Territory by the citizens of San Juan county.

The *second* is located near Las Vegas on a tract of 160 acres of land, which may be irrigated, and which was donated to the Territory by the citizens of San Miguel county.

The *third* will be located near Roswell on a tract of 100 acres of irrigated land, which has recently been donated to the Territory by the citizens of Chaves county.

In each of the several acts creating these Branch Experiment Stations is a section authorizing the Regents to apply to the support and maintenance of each station such a part of the funds received from the United States for Agricultural Experiment Stations as can be so applied *in justice to each of the other stations, and to the Agricultural College*. There is no doubt that more Branch Stations have already been created by the Legislative Assembly than can be provided for out of the Station fund of the College. It should be understood that the Branch Stations already established can never be very beneficial to the sections in which they are located, unless the Territory is willing to assume the burden of their support. The analytical work in chemistry, botany, and entomology will always be done at the College Experiment Station and the results published from here. If any further demands are made on the Experiment Station fund the character of the work done here will necessarily deteriorate. The Agricultural Colleges in the old states without exception have abolished all their Branch Experiment Stations, because of the great expense and small returns.





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27/58

EIGHTH  
ANNUAL  
CATALOGUE

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COLLEGE OF AGRICULTURE

—AND—

Mechanic Arts.

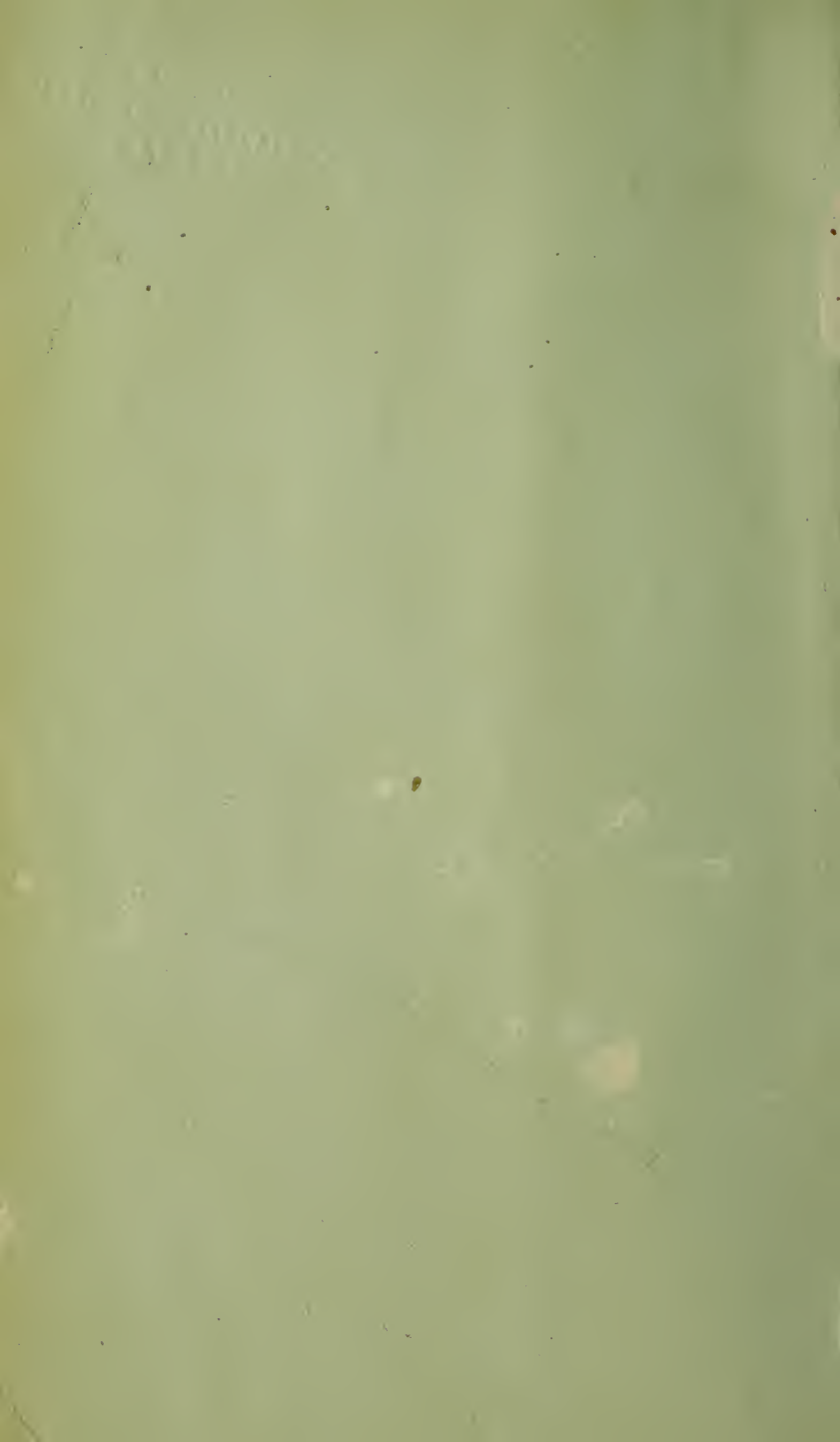
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Mesilla Park.

\_\_\_\_\_

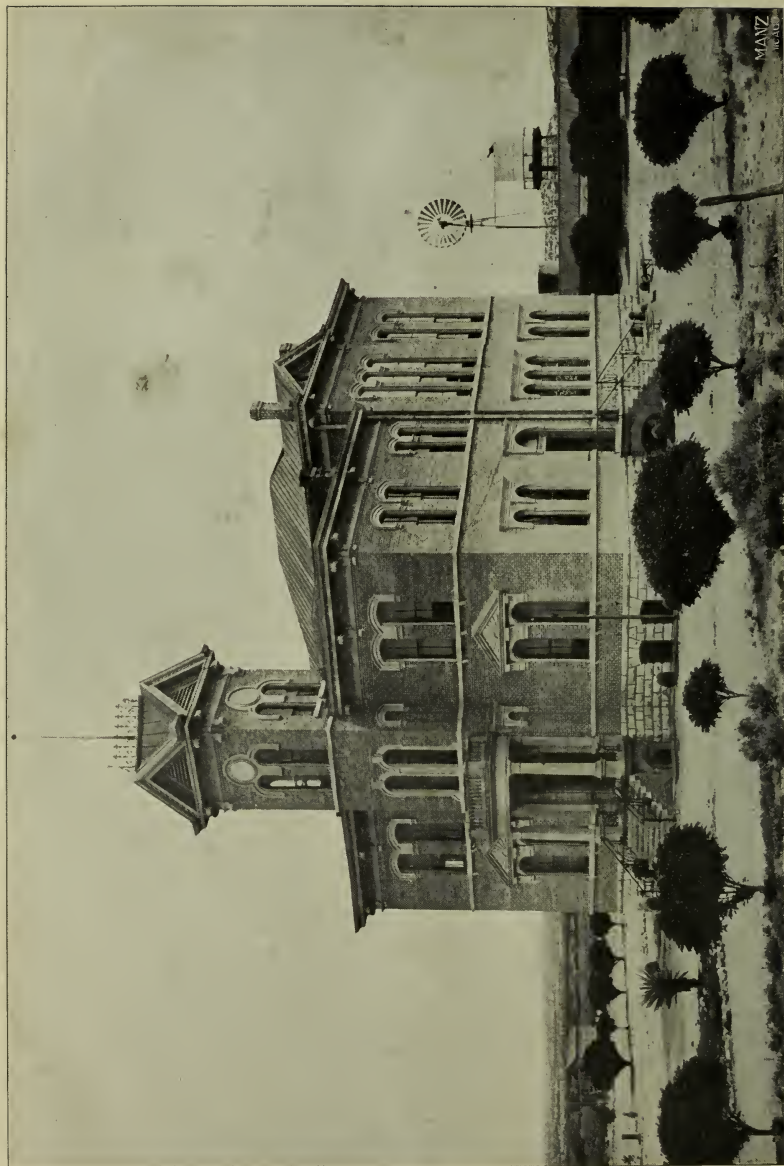
1897-'98,

And Announcements for 1898-'99.









THE MAIN BUILDING

NEW MEXICO

COLLEGE OF AGRICULTURE

— AND —

MECHANIC ARTS,

---

MESILLA PARK.

---

CATALOGUE FOR 1897-'98,

And Announcements for 1898-'99.

### **Calendar for 1898-'99.**

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Re-examinations and examinations of candidates for admission, Tuesday, September 6, 1898.

First term begins Wednesday, September 7, 1898.

First term ends Wednesday, November 23, 1898.

Second term begins Monday, November 28, 1898.

Christmas vacation begins Thursday, December 22, 1898, and ends Tuesday, January 3, 1899.

Second term ends Wednesday, March 8, 1899.

Third term begins Monday, March 13, 1899.

Third term ends Friday, June 2, 1899.

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## BOARD OF REGENTS.

---

MIGUEL A. OTERO, Governor. *Ex-Officio*.

MANUEL C. DE BACA, Supt. Public Instruction, *Ex-Officio*.

JACINTO ARMIJO, Las Cruces, term expires 1898.

HENRY D. BOWMAN, Mesilla Park, term expires 1899.

G. A. RICHARDSON, Roswell, term expires 1900.

A. A. JONES, Las Vegas, term expires 1901.

PHILIP H. CURRAN, Las Cruces, term expires 1902.

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### Officers of the Board.

G. A. RICHARDSON, President.

PHILIP H. CURRAN, Secretary and Treasurer.

## FACULTY.

---

•[Arranged in the order of appointment, except the President.]

CORNELIUS T. JORDAN, A. M.,

*President and Professor of Political Science.*

CLARENCE T. HAGERTY, M. S.,

*Professor of Mathematics and Astronomy.*

ARTHUR GOSS, M. S., A. C.,

*Professor of Chemistry.*

GEORGE VESTAL.

*Professor of Agriculture and Horticulture.*

FRANK W. BRADY, M. E.,

*Professor of Mechanical and Civil Engineering.*

IDA M. JONES.

*Professor of Spanish.*

T. D. A. COCKERELL.

*Professor of Entomology and in charge of Physiology and Zoology.*

HIRAM HADLEY, A. M.,

*Professor of History and Pedagogy.*

ELMER O. WOOTON, A. M.,

*Professor of Botany, Geology, and Physics.*

FREDERICK F. BARKER, LL. B.,

*Professor of English and Latin.*

RALPH ROY LARKIN, B. S.,

*Principal of the Preparatory Department and in charge of Sub-Freshman Class.*



## INSTRUCTORS AND ASSISTANTS.

---

FRANK E. LESTER,

*Instructor in Stenography and Typewriting, Librarian,  
College Clerk and Secretary to the Faculty.*

R. FRED HARE, M. S.,

*Instructor in Chemistry.*

CHARLES MILLS,

*Instructor in College Shops.*

ELLEN F. GIBSON,

*Instructor in Elocution and Physical Culture, and Assistant in  
the Preparatory Department.*

JOSEPH F. BENNETT, JR., B. S.,

*Instructor in Bookkeeping.*

FABIAN GARCIA, B. S.,

*Assistant in Agriculture and Horticulture.*

GERALDINE COMBS.

*Assistant in the Preparatory Department.*

IDA E. FREEMAN,

*Assistant in the Preparatory Department and Matron of  
Girls' Dormitory.*

DU VAL GARLAND CRAVENS, B. S.,

*Assistant in the Engineering Department.*

KATHERINE DOUGHTY,

*Assistant in the Preparatory Department.*

HUMBOLDT CASAD,

*Assistant in Agriculture and Horticulture.*

ELIZABETH WICKHAM.

*Assistant Librarian.*

HELEN M. MACGREGOR.

*Assistant College Clerk.*

## FACULTY COMMITTEES FOR 1898-'99.

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### COURSES OF STUDY.

Clarence T. Hagerty, *Chairman*.

Hiram Hadley.....Elmer O. Wooton.

### CATALOGUE.

T. D. A. Cockerell, *Chairman*.

Frederick F. Barker.....Ralph Roy Larkin.

### JUDICIARY.

Arthur Goss, *Chairman*.

Clarence T. Hagerty.....T. D. A. Cockerell.

### BUILDINGS AND GROUNDS.

George Vestal, *Chairman*.

T. D. A. Cockerell.....Frank W. Brady.

### LEGISLATION FOR COLLEGE.

Frank. W. Brady, *Chairman*.

George Vestal.....Hiram Hadley.

### ENTERTAINMENT.

Ralph Roy Larkin, *Chairman*.

Elmer O. Wooton.....Ida M. Jones.

### BOARDING.

Hiram Hadley, *Chairman*.

Clarence T. Hagerty.....Arthur Goss.

### DISCIPLINE.

Elmer O. Wooton, *Chairman*.

Frank W. Brady.....Ida M. Jones.

### LIBRARY.

Ida M. Jones, *Chairman*.

Frederick F. Barker.....Arthur Goss.

NOTE.—The President of the Faculty is ex-officio a member of all Committees.

## GENERAL STATEMENT.

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### LOCATION.

The New Mexico College of Agriculture and Mechanic Arts is situated at Mesilla Park, Dona Ana County, about two miles south-east of Las Cruces. Its location in the Mesilla Valley, gives it the best advantages for agricultural and horticultural experiments. The location is a good one from a sanitary point of view. The campus is high and dry, and there are no surroundings which can breed disease. The college farm is crossed near the center by a fine driveway from Mesilla Park station to the College buildings. Visitors are always welcome.

Las Cruces is on the main line of the Atchison, Topeka & Santa Fe Railroad, and is accessible from the different parts of the Territory. It has a population of about 2,500 people, and all lines of business are carried on. It has a good public school, several mission schools, and a Catholic Academy for the education of girls. The Presbyterians, Methodists, and Catholics have large congregations and fine churches, and students are welcomed to their services. The town is noted for being the largest fruit and alfalfa shipping point in the Territory, and is rapidly becoming known as one of the finest winter health resorts in the United States.

### ORIGIN.

The New Mexico College of Agriculture and Mechanic Arts, under a slightly different name, was established by the Twenty-eighth Legislative Assembly of New Mexico by act ap-

proved February 28, 1889. The purpose of the institution is clearly defined in Section 19, of this act:—

“The Agricultural College created and established by this act, shall be non-sectarian in character, and devoted to practical instruction in agriculture, mechanic arts, natural sciences connected therewith, as well as a thorough course of instruction in all branches of learning bearing upon agriculture and other industrial pursuits.”

The branches in which instruction may be given are set forth as follows in Section 20 of the same act:—

“The course of instruction of the college hereby created shall embrace the English language, literature, mathematics, philosophy, civil engineering, chemistry, animal and vegetable anatomy and physiology, the veterinary art, entomology, geology, and political, rural, and household economy, horticulture, moral philosophy, history, mechanics, and such other sciences and courses of instruction as shall be prescribed by the regents of this institution of learning.”

By Section 25 of the same act, the assent of the Legislative Assembly was given to the establishment of Experiment Stations within the Territory of New Mexico in connection with the Agricultural College in pursuance of the act of Congress approved March 2, 1887, the Hatch Act.

#### INCOME.

The revenues of this college are derived from the following sources:—

1. Students' fees.
2. Sale of college farm products.
3. Territorial tax and special appropriations.
4. The United States under Congressional Act of March 2, 1887—the Hatch fund.
5. The United States under Congressional Act of August 30, 1890—the Morrill fund.

The money received from students and from the sale of

products from the college farm has, so far, been very limited in amount, and has been used principally for paying expenses not provided for by either of the acts of Congress.

The Territorial Act creating the institution provided for an annual levy of one-fifth of a mill, commencing with the year 1889. This levy now yields an annual income of about \$5,500.

By the United States Law of March 2, 1887, the *Hatch Act*, appropriations are made for the maintenance of Experiment Stations in connection with the Agricultural Colleges in the several states and territories. For the support of each station there is set apart the sum of \$15,000, a year, payable quarterly. This money must be used for "paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results." Bulletins showing progress must be printed each quarter, and sent to each newspaper in the Territory and to all farmers who apply for them. This fund first became available for this college in 1889-'90, to the amount of \$10,000. Since July 1, 1890, \$15,000 a year has been received. *After the first year, only five per cent of this fund can be used to erect, enlarge or repair buildings for the use of the Experiment Station.*

The *Morrill Fund* was created by the United States law of August 30, 1890, "for the more complete endowment and support of the Colleges of Agriculture and Mechanic Arts in the several states and territories." It is paid over to them before July 31, of each year. The College received this fund first in 1890, to the amount of \$15,000. For the coming fiscal year this fund will be \$24,000 and will increase \$1,000 a year until it reaches \$25,000, at which sum it will remain. This fund can be applied only "to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their application in the industries of life, and to the facilities for such instruction." *No part of this fund can be used for building purposes.*

## ENDOWMENT.

A bill has recently been passed by Congress granting the College 100,000 acres of public land, the proceeds of which are to form a permanent endowment fund.

If this amount of land be carefully located, it can be made to yield the college in time a fair endowment.



## Requirements for Admission.

To enter the Freshman class of the college, students must be at least sixteen years of age, and unless admitted on diploma, must pass examinations in reading, spelling, arithmetic complete, including the metric system, algebra through quadratics, United States history, geography, grammar complete, composition, the elements of rhetoric, and free-hand drawing.

All candidates for admission to the college must furnish satisfactory evidence of good moral character.

Students from other colleges of equal rank will be admitted to corresponding classes in this college upon presentation of certificates showing rank and honorable dismissal.

### COMMISSIONED HIGH SCHOOLS.

The Principals and Superintendents of the High Schools enumerated below are authorized to prepare students for admission to the New Mexico College of Agriculture and Mechanic Arts:—

Raton High School.  
Las Vegas High School.  
Albuquerque High School.  
Deming High School.  
Roswell High School.  
El Paso High School.

Upon presentation of Diplomas, graduates of the above-mentioned High Schools will be admitted without examination to the course in Stenography and Type-writing, or to the

Freshman class in any of the Collegiate courses of this institution. Advanced standing may be secured by passing the required examinations.

Students who have completed spelling, reading, grammar, geography, arithmetic, and United States history in the public schools of the above-named places in a satisfactory manner, and can produce certificates to that effect, will be admitted to the Sub-Freshman class, or to the course in Bookkeeping, without examination. Such students must be not less than fifteen years of age.

#### COMMISSIONED GRADED SCHOOLS.

The principals of the Graded Schools enumerated below are authorized to prepare students for admission to the Sub-Freshman class and to the course in Bookkeeping:—

Silver City Graded School.

Gallup Graded School.

Clayton Graded School.

Springer Graded School.

White Oaks Graded School.

Students of the above-named schools, who have completed spelling, reading, grammar, geography, United States history, and arithmetic, in a satisfactory manner and hold certificates to that effect, will be admitted without examination to the Sub-Freshman class, or to the course in Bookkeeping, provided they be not less than fifteen years of age.

The college reserves the right to withdraw these commissions at any time should the character of the work done fall below the required standard of excellence.

## COURSES OF STUDY.

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The following Collegiate Courses of Study are open to students:—

- I. Agricultural Course.
- II. Mechanical Engineering Course.
- III. Civil Engineering Course.
- IV. Scientific Course.

With very few exceptions, these courses are alike in the Freshman and Sophomore years. For these years, the branches of study have been selected for their value in attaining mental culture, and in furnishing the necessary information for the strictly technical studies of the Junior and Senior years. An attempt is made to carefully supplement theory with practice in all courses.

Special courses will not be encouraged by the Faculty. With the number of regular courses given, there is little need for them. Students of mature years, who can not remain long enough to take a full course, may be allowed to take special courses. The Faculty reserves the right to refuse such requests, or to order such modifications as may seem best for the student and college. No degrees are granted for special work, but those who perform such work in a satisfactory manner will receive certificates.

### DEGREES.

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The degree of *Bachelor of Science* (B. S.) is conferred on students who satisfactorily complete the work prescribed in any of the four Collegiate courses of study.

The degree of *Master of Science* (M. S.) is conferred on students, who, after taking at this College the degree of B. S., pursue for at least one year here, or two years elsewhere, a course of study, approved by the Faculty, in at least two departments, pass an examination on the same, and present a satisfactory thesis.

*COURSES OF STUDY.—Sub-Freshman Year.*

FIRST TERM.	SECOND TERM.	THIRD TERM.
Reading and Elocution . . . . . 3	Reading and Elocution . . . . . 3	Reading and Elocution . . . . . 3
Word Analysis . . . . . 2	Word Analysis . . . . . 2	Word Analysis . . . . . 2
Algebra . . . . . 5	Algebra . . . . . 5	Algebra . . . . . 5
English Grammar and Rhetoric . . . . . 5	English Grammar and Rhetoric . . . . . 5	English Grammar and Rhetoric . . . . . 5
Advanced United States History . . . . . 5	Civics . . . . . 5	Physical Geography . . . . . 5
Drawing . . . . . 2	Drawing . . . . . 2	Drawing . . . . . 2
Physics . . . . . 3	Physics . . . . . 3	Physics . . . . . 3
Botany . . . . . 3	Botany . . . . . 3	Advanced Arithmetic . . . . . 3

*PREPARATORY DEPARTMENT.*

SECOND YEAR.

Reading . . . . . 5	Reading . . . . . 5	Reading . . . . . 5
Spelling . . . . . 5	Spelling . . . . . 5	Spelling . . . . . 5
Complete Arithmetic . . . . . 5	Complete Arithmetic . . . . . 5	Complete Arithmetic . . . . . 5
English Grammar . . . . . 5	English Grammar . . . . . 5	English Grammar . . . . . 5
Pennmanship . . . . . 5	Pennmanship . . . . . 5	Pennmanship . . . . . 5
United States History . . . . . 5	United States History . . . . . 5	United States History . . . . . 5

FIRST YEAR.

Reading . . . . . 5	Reading . . . . . 5	Reading . . . . . 5
Spelling . . . . . 5	Spelling . . . . . 5	Spelling . . . . . 5
Arithmetic . . . . . 5	Arithmetic . . . . . 5	Arithmetic . . . . . 5
English Grammar . . . . . 5	English Grammar . . . . . 5	English Grammar . . . . . 5
Pennmanship . . . . . 5	Pennmanship . . . . . 5	Pennmanship . . . . . 5
Geography . . . . . 5	Geography . . . . . 5	Geography . . . . . 5

## COURSES OF STUDY.—Freshman Year.

AGRICULTURAL	MECHANICAL ENGINEERING.	CIVIL ENGINEERING.	SCIENTIFIC.
Geometry ..... 5 Spanish or Latin ..... 5 General History ..... 5 English ..... 3 PRACTICE. Carpentry and Joinery ..... 7 Free-hand Drawing ..... 5 Elocution ..... 2	Geometry ..... 5 Spanish or Latin ..... 5 General History ..... 5 English ..... 3 PRACTICE. Carpentry and Joinery ..... 7 Free-hand Drawing ..... 5 Elocution ..... 2	Geometry ..... 5 Spanish or Latin ..... 5 General History ..... 5 English ..... 3 PRACTICE. Carpentry and Joinery ..... 7 Free-hand Drawing ..... 5 Elocution ..... 2 Floriculture ..... *7	Geometry ..... 5 Spanish or Latin ..... 5 General History ..... 5 English ..... 3 PRACTICE. Carpentry and Joinery ..... 7 Free-hand Drawing ..... 5 Elocution ..... 2 Floriculture ..... *7
Geometry ..... 5 General History ..... 5 Spanish or Latin ..... 5 English ..... 3 PRACTICE. Wood Turning ..... 7 Free-hand Drawing ..... 5 Elocution ..... 2	Geometry ..... 5 General History ..... 5 Spanish or Latin ..... 5 English ..... 3 PRACTICE. Wood Turning ..... 7 Free-hand Drawing ..... 5 Elocution ..... 2	Geometry ..... 5 General History ..... 5 Spanish or Latin ..... 5 English ..... 3 PRACTICE. Wood Turning ..... 7 Free-hand Drawing ..... 5 Elocution ..... 2 Literary Reading ..... *5	Geometry ..... 5 General History ..... 5 Spanish or Latin ..... 5 English ..... 3 PRACTICE. Wood Turning ..... 7 Free-hand Drawing ..... 5 Elocution ..... 2 Literary Reading ..... *5
Geometry ..... 5 Algebra ..... 5 Spanish or Latin ..... 4 English ..... 2 PRACTICE. Blacksmithing ..... 7 Anatomy and Physiology ..... 5 Elocution ..... 2	Geometry ..... 5 Algebra ..... 5 Spanish or Latin ..... 4 English ..... 2 PRACTICE. Blacksmithing ..... 7 Mechanical Drawing ..... 5 Elocution ..... 2	Geometry ..... 5 Algebra ..... 5 Spanish or Latin ..... 4 English ..... 2 PRACTICE. Blacksmithing ..... 7 Mechanical Drawing ..... 5 Elocution ..... 2	Geometry ..... 5 Algebra ..... 5 Spanish or Latin ..... 4 English ..... 2 PRACTICE. Blacksmithing ..... 7 Anatomy and Physiology ..... 5 Elocution ..... 2 Literary Reading ..... *5

\*For women instead of Carpentry, Wood Turning, and Blacksmithing.  
 note.—The figures denote the number of hours per week devoted to recitation and practice.

*COURSES OF STUDY.—Sophomore Year.*

AGRICULTURAL.		MECHANICAL ENGINEERING.		CIVIL ENGINEERING.		SCIENTIFIC.	
<i>First Term</i>		<i>Second Term.</i>		<i>Third Term.</i>			
Plane Trigonometry .....	5	Plane Trigonometry .....	5	Plane Trigonometry .....	5	Plane Trigonometry .....	5
Physics .....	5	Physics .....	5	Physics .....	5	Physics .....	5
Spanish or Latin .....	5	Spanish or Latin .....	5	Spanish or Latin .....	5	Spanish or Latin .....	5
English .....	5	English .....	5	English .....	5	English .....	5
PRACTICE.		PRACTICE.		PRACTICE.		PRACTICE.	
Farm Work .....	7	Pattern Making .....	7	Pattern Making .....	7	Pedagogy .....	5
Biological Laboratory .....	5	Mechanical Drawing .....	5	Mechanical Drawing .....	5	Biological Laboratory .....	5
Elocution .....	2	Elocution .....	2	Elocution .....	2	Elocution .....	2
Spherical Trigonometry .....	4	Spherical Trigonometry .....	4	Spherical Trigonometry .....	4	Spherical Trigonometry .....	4
Physics .....	5	Physics .....	5	Physics .....	5	Physics .....	5
Spanish or Latin .....	5	Spanish or Latin .....	5	Spanish or Latin .....	5	Spanish or Latin .....	5
Political Science .....	5	Descriptive Geometry .....	5	Descriptive Geometry .....	5	Political Science .....	5
Surveying .....	2	Surveying .....	2	Surveying .....	2	Surveying .....	2
PRACTICE.		PRACTICE.		PRACTICE.		PRACTICE.	
Surveying .....	6	Surveying .....	6	Surveying .....	5	Surveying .....	6
Biological Laboratory .....	5	Pattern Making .....	7	Pattern Making .....	7	Biological Laboratory .....	5
Elocution .....	2	Elocution .....	2	Elocution .....	2	Elocution .....	2
Horticulture .....	5	Higher Algebra .....	5	Higher Algebra .....	5	Higher Algebra .....	5
Physics .....	5	Physics .....	5	Physics .....	5	Physics .....	5
Spanish or Latin .....	5	Spanish or Latin .....	5	Spanish or Latin .....	5	Spanish or Latin .....	5
English .....	4	English .....	4	English .....	4	English .....	4
PRACTICE.		PRACTICE.		PRACTICE.		PRACTICE.	
Biological Laboratory .....	5	Mechanical Drawing .....	5	Mechanical Drawing .....	5	Biological Laboratory .....	5
Farm Work .....	7	Foundry .....	7	Foundry .....	7	Pedagogy .....	5
Elocution .....	2	Elocution .....	2	Elocution .....	2	Elocution .....	2

\* For women instead of Surveying.

NOTE.—The figures denote the number of hours per week devoted to recitation and practice.



COURSES OF STUDY.—*Junior Year.*

AGRICULTURAL.		MECHANICAL ENGINEERING.		CIVIL ENGINEERING.		SCIENTIFIC.	
Agriculture.....5 Political Economy.....5 Elementary Mechanics.....5 English.....3  PRACTICE. Farm Work.....7 Biological Laboratory.....5 Elocution.....2	5 5 5 3  7 5 2	Analytic Geometry.....5 Political Economy.....5 Elementary Mechanics.....5 English.....3  PRACTICE. Machine Shop.....7 Elementary Machine Design.....5 Elocution.....2		Analytic Geometry.....5 Political Economy.....5 Elementary Mechanics.....5 English.....3  PRACTICE. Surveying.....7 Topographical Drawing.....5 Elocution.....2		Anal. Geom., Span., or Latin...5 Political Economy.....5 Elementary Mechanics.....5 English.....3  PRACTICE. Literary Reading.....7 Biological Laboratory.....5 Elocution.....2	
		Analytic Geom. & Calculus.....5 Chemistry.....10 Mechanism.....5  PRACTICE. Machine Shop.....7 Elementary Machine Design.....5 Elocution.....2		Analytic Geom. & Calculus...5 Chemistry.....10 Mechanism.....5  PRACTICE. Surveying and Mapping.....12 Elocution.....2		An'l. Geom. & Cal., Span., or Lat.5 Chemistry.....10 English.....5  PRACTICE. Biological Laboratory.....10 Elocution.....2	
		Calculus.....5 Strength of Materials.....5 Analytical Mechanics.....5 English.....3  PRACTICE. Chemical Laboratory.....12 Elocution.....2		Calculus.....5 Strength of Materials.....5 Analytical Mechanics.....5 English.....3  PRACTICE. Chemical Laboratory.....12 Elocution.....2		Calculus, Spanish, or Latin...5 Constitutional Law.....5 History of Education.....5 English.....3  PRACTICE. Chemical Laboratory.....12 Elocution.....2	

NOTE.—The figures denote the number of hours per week devoted to recitation and practice.

# COURSES OF STUDY.—Senior Year.

## AGRICULTURE AND MECHANIC ARTS.

19

	AGRICULTURAL.	MECHANICAL ENGINEERING.	CIVIL ENGINEERING.	SCIENTIFIC.
First Term.	<p>Agriculture.....5</p> <p>Mineralogy.....5</p> <p>Entomology.....5</p> <p>Astronomy.....4</p> <p>PRACTICE.</p> <p>Agriculture, Horticulture, Chemistry, or Biology.....12</p> <p>Astronomy.....1</p>	<p>Hydraulics.....5</p> <p>Mineralogy.....5</p> <p>Steam Engine.....5</p> <p>Astronomy.....4</p> <p>PRACTICE.</p> <p>Machine Shop.....7</p> <p>Machine Design.....5</p> <p>Astronomy.....1</p>	<p>Hydraulics.....5</p> <p>Mineralogy.....5</p> <p>Irrigation Engineering.....5</p> <p>Astronomy.....4</p> <p>PRACTICE.</p> <p>Irrigation Surveying.....7</p> <p>Roofs and Bridges.....5</p> <p>Astronomy.....1</p>	<p>Psychology.....5</p> <p>Mineralogy.....5</p> <p>Entomology.....5</p> <p>Astronomy.....4</p> <p>PRACTICE.</p> <p>Chemistry or Biology.....12</p> <p>Astronomy.....1</p>
Second Term.	<p>Stock.....5</p> <p>Geology.....5</p> <p>History of Civilization.....3</p> <p>English.....3</p> <p>Astronomy.....2</p> <p>PRACTICE.</p> <p>Agriculture, Horticulture, Chemistry, or Biology.....12</p> <p>Astronomy.....1</p>	<p>Hydraulics.....5</p> <p>Steam and Boilers.....5</p> <p>Engineering Structures.....3</p> <p>English.....3</p> <p>Astronomy.....2</p> <p>PRACTICE.</p> <p>Engine and Boiler Tests.....7</p> <p>Roofs and Bridges.....5</p> <p>Astronomy.....1</p>	<p>Hydraulics.....5</p> <p>Geology.....5</p> <p>Railroad Engineering.....3</p> <p>English.....3</p> <p>Astronomy.....2</p> <p>PRACTICE.</p> <p>Railroad Surveying.....7</p> <p>Roofs and Bridges.....5</p> <p>Astronomy.....1</p>	<p>Psychology.....5</p> <p>Geology.....5</p> <p>History of Civilization.....3</p> <p>English.....3</p> <p>Astronomy.....2</p> <p>PRACTICE.</p> <p>Chemistry or Biology.....12</p> <p>Astronomy.....1</p>
Third Term.	<p>Economic Bot. and Entomol.....5</p> <p>Geology.....3</p> <p>Horticulture.....3</p> <p>Elocution and Oration.....1</p> <p>PRACTICE.</p> <p>Thesis.....12</p>	<p>Engineering Structures.....5</p> <p>Electrical Engineering.....5</p> <p>Astronomy.....2</p> <p>Elocution and Oration.....4</p> <p>PRACTICE.</p> <p>Thesis and Thesis Drawings.....12</p> <p>Astronomy.....1</p>	<p>Engineering Structures.....5</p> <p>Electrical Engineering.....5</p> <p>Astronomy.....2</p> <p>Elocution and Oration.....4</p> <p>PRACTICE.</p> <p>Thesis and Thesis Drawings.....12</p> <p>Astronomy.....1</p>	<p>Pedagogy.....5</p> <p>Geology.....5</p> <p>Astronomy.....2</p> <p>Elocution and Oration.....4</p> <p>PRACTICE.</p> <p>Thesis.....12</p> <p>Astronomy.....1</p>

NOTE.—The figures denote the number of hours per week devoted to recitation and practice.

$$28 = 21 + 2 \text{ a term.}$$

$$33 = 24$$

If hours were one 2.

35-  
30  
9  
3  
13  
3  
30

12  
6  
19  
13

18  
6  
24  
26

## DEPARTMENTS OF INSTRUCTION.

### AGRICULTURE AND HORTICULTURE.

GEORGE VESTAL, PROFESSOR.

FABIAN GARCIA, ASSISTANT.

Agriculture and Horticulture involve a larger number of sciences than any other human employment, and become a fit sequence to a collegiate training. It is the policy to give this department of the college the largest development practicable, and to meet the full demand for agricultural education as fast as it shall arise.

It is the aim of this department to teach agriculture in such a way as to give the student a correct understanding of the scientific principles which underlie the operations of the farm. In the class room, the subjects are taught by lectures, by the careful reading of agricultural and horticultural books, and by frequent oral and written discussions by the students of the principles taught.

The practice consists of work on the Experiment-Station farm, orchards, vineyards, gardens, campus, etc., under the supervision of a skilled person with a view of putting into practice the theories advanced in the class room. The practice will be along lines having a direct bearing on the class-room work outlined in the course of study. In these studies, students will be required to take and preserve notes as a record of the work done in the class room and field.

In the first term of the Freshman year, girls will receive instruction in floriculture, supplemented by practice, which will

include the propagation and care of ornamental plants, with the view of making the knowledge gained useful in home adornment.

During the first term of the Sophomore year, the time will be spent in familiarizing the student with the functions of agricultural plants; classification, composition, and improvement of soils, etc. In the third term of this year, vegetable gardening will be taught, which will include the planting, cultivating, harvesting, and marketing of all kinds of vegetables.

In the first term of the Junior year, the instruction will consist principally of text-book work on the following subjects: fences and farm buildings, farm conveniences, the mechanical construction and use of farm implements, etc. In the second term there will be study and practice on the care and management of live stock. During the third term the time will be devoted to fruit culture, (using Barry's Fruit Culture as a text-book) which includes a comprehensive study of the propagation of fruit trees and plants by seeds, cuttings, layers, grafting and budding; the planting, pruning, and general management of orchards, vineyards and small fruit gardens; and the extermination of fungi and insect pests by spraying and other means.

During the first term of the Senior year, the time is devoted to advanced agriculture, which will include farm law, manner of carrying on agricultural experiments, and text-book work on landscape gardening and forestry. The second term will be devoted to the study of stock breeding, using Miles' Stock Breeding as a text-book. In the third term, instruction will be given in floriculture by lectures, supplemented by practice in the greenhouse. Students may elect to take practice work in agriculture or horticulture for twelve hours a week throughout the Senior year.

*Equipment.*—The Experiment Station Farm, which includes the gardens, orchards, and vineyards, contains a large collection of all the leading fruit trees and plants, and furnishes a large amount of work for agricultural students, where they have an opportunity of observing the operations usually carried on on a well regulated farm. The greenhouse and flower garden are well

filled with a choice collection of plants, and more are being constantly added. The library contains a well selected assortment of agricultural and horticultural books and periodicals.

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## CHEMISTRY.

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ARTHUR GOSS, PROFESSOR.

R. F. HARE, INSTRUCTOR.

*Required Chemistry.*—Chemistry is taken by all regular college students, in the second and third terms of the Junior year. The work during the second term will consist of a study of the fundamental principles of the science, as outlined in a standard text, and will be supplemented by frequent exercises in the laboratory. The time required of the students this term, besides that necessary for the preparation of lessons, will be two hours daily. During the third term twelve hours each week will be spent in the laboratory in the study of qualitative analysis. Each student will be provided with a complete set of apparatus and reagents, by means of which any ordinary compound may be analyzed. The student will thus learn, by actual practice, the various methods of separating the different elements.

*Elective Chemistry.*—Chemistry is an elective study throughout the Senior year. For students who take chemistry, the work of the first term will consist of laboratory practice in general quantitative analysis. During this term students will receive instruction in the use of the balance and in general quantitative manipulation. Each student will be required to make some of the fundamental quantitative determinations, thus becoming familiar with quantitative processes by actual practice. The nature of the work done during the last two terms of the Senior year, will be left largely to the choice of the student; but, in general, will consist of work along some line of original investigation. Thus an investigation may be undertaken concerning waters, soils, ores, forage plants, methods of



analysis, or whatever subject the student may be particularly interested in; provided the same is approved by the professor in charge of the department.

*Assaying.*—For the accommodation of those of our students who desire to take up this branch, instruction is given in the fire assay of gold, silver and lead ores, and in the wet assay of copper, iron, lime, silica and various other substances. The work is supplemented by a course of reading in standard books on assaying, metallurgy, analytical chemistry, etc., a considerable number of which are to be found in the Department Library.

Students taking assaying are required to take the regular work in chemistry and also the course in geology and mineralogy given in the institution.

No student will be admitted to the course in assaying who has not had sufficient preliminary training to enable him to carry the work.

Instruction in assaying will begin the first term and will continue throughout the year at such time as does not interfere with the regular work in chemistry.

#### EQUIPMENT.

Since last year the chemical department has been moved into new quarters. The department now occupies practically the entire lower floor of the new Science Hall. The increase in room has made possible the complete separation of the college and station chemical work, and will allow of better work being done in both divisions. Three large rooms and a smaller store room have been set apart for the station work; and five rooms and a store room, for use in the instruction of students. Besides the above, a small brick building has been erected at a safe distance from the main building in which to store gasolene and other combustible and explosive substances.

The rooms set apart for use in the instruction of students are as follows:—

1. A large qualitative laboratory for students beginning the study of chemistry This laboratory is fitted with work



desks which are supplied with gas, water, and drain, and have drawers and lockers with combination locks. The qualitative laboratory also contains, among other things, a sink, and a fume closet for work in which noxious gases are present.

2. A quantitative laboratory for the use of advanced students. This laboratory is supplied with two entirely new, thoroughly equipped, work desks fitted with gas and water pipes, a drain trough through the centre, a bottle rack on top, and drawers and lockers with combination locks. This laboratory also contains a first-class large fume closet and a sink.

3. A fire-proof assay laboratory, which contains six gasolene crucible furnaces and two muffle furnaces. This laboratory is also supplied with a Bosworth ore crusher, a sampling plate, a complete set of sieves, crucibles, tongs, cupel moulds, and other accessories necessary in a well equipped laboratory of this character.

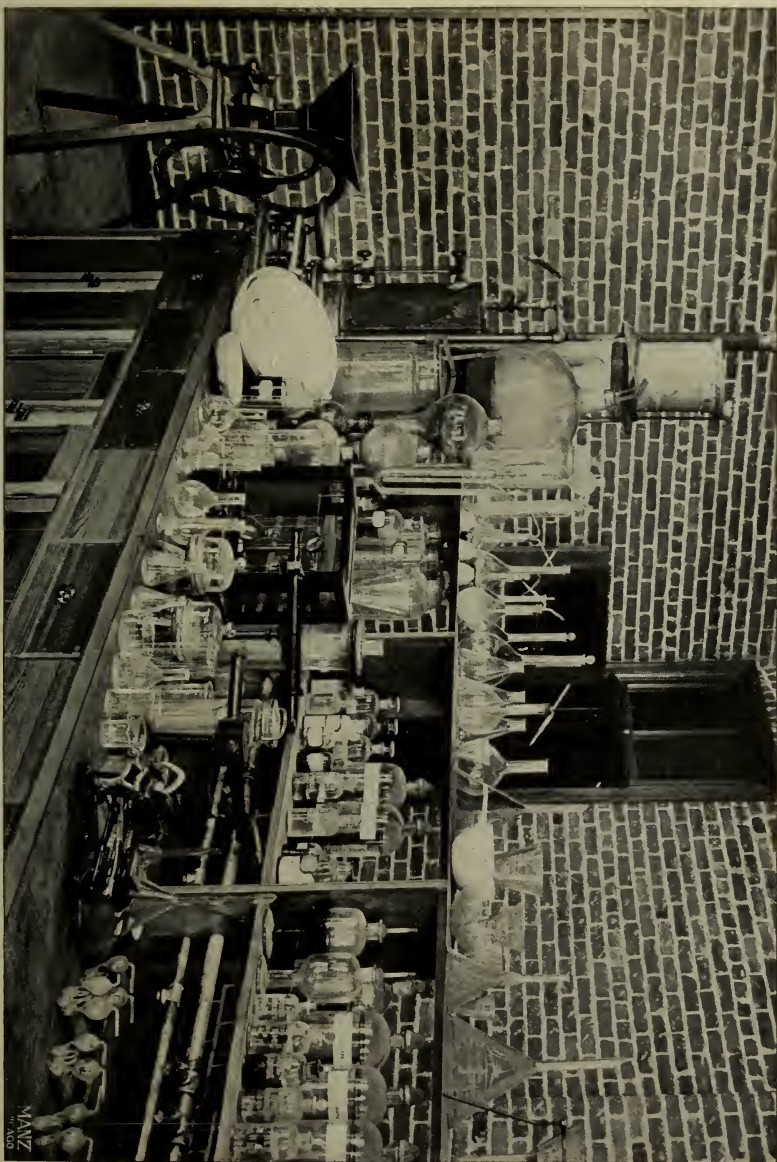
4. A weighing room, opening into the quantitative and assay laboratories. This room is fitted with a substantial balance table mounted on brick piers in contact with the ground, thus insuring freedom from floor vibration. This room is, at present, supplied with an Eimer and Amend gold-plated assay balance sensitive to the one two-hundredth of a milligram, a Becker's chemical balance, and a heavier balance for rough weighing. One or more balances will probably be added to the equipment of this room before next year. This room is also provided with a large table on which to mix assay charges, etc., and with a case for sample bottles.

5. A lecture room, supplied with a lecture desk, a sink, gas, blackboards, and other accessories.

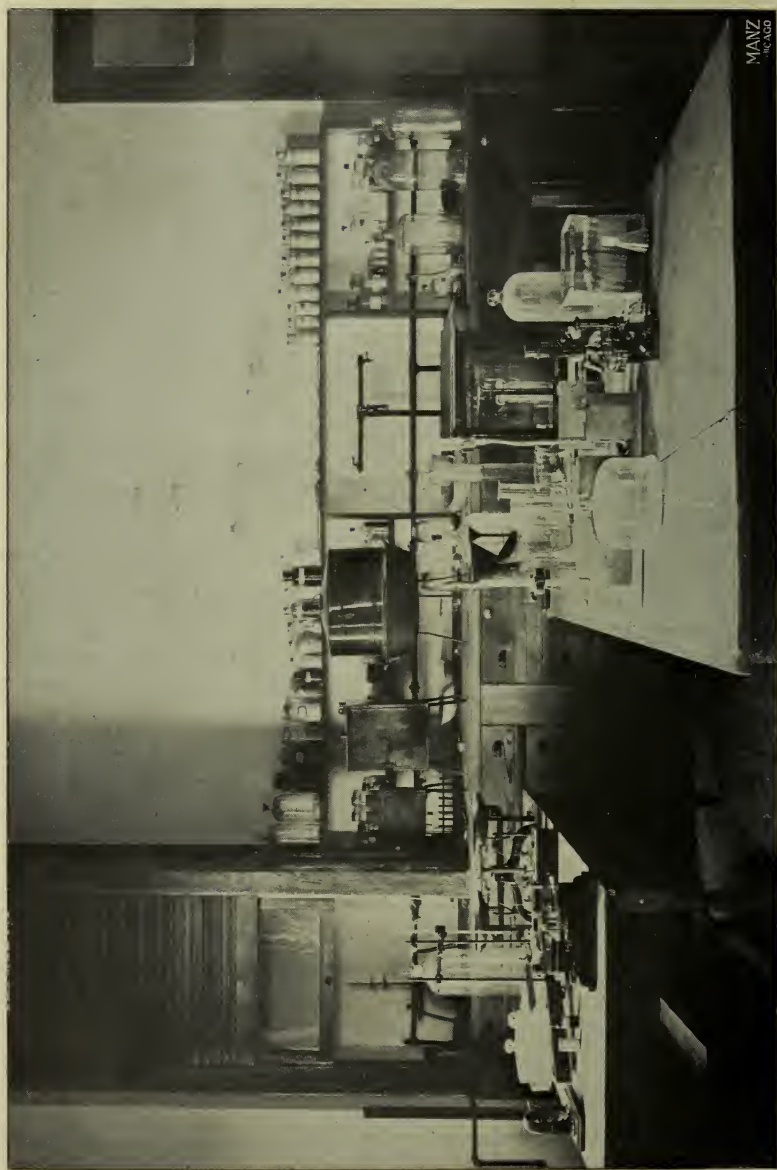
6. A conveniently-located store-room for chemicals and general laboratory supplies for students.

The laboratories used for the chemical work have brick walls, and wooden ceilings, fourteen feet high. Each laboratory is also supplied with one or more ventilating flues which aid in the removal of fumes and ventilation of the rooms. The general equipment of the laboratories has been very materially

Alfredo M. Sanchez  
College,



APPARATUS IN STATION CHEMICAL LABORATORY



MANZ  
INC. ADO

LABORATORY OF PLANT PHYSIOLOGY AND BACTERIOLOGY



increased, and is modern and first-class in every particular.

The laboratories fitted up for the accommodation of the Experiment Station work contain, among other things, three work desks supplied with gas, water, and air exhaust pipes for rapid filtration, a commodious hood to carry off noxious gases, apparatus for the determination of nitrogen by the Kjeldahl method, a titration shelf and system of burettes, and a first-class still for the preparation of distilled water. The Station equipment also includes, a balance table mounted on brick piers in contact with the ground, a Herzberg and Kuhlmann short beam automatic analytical balance, a Springer torsion balance, a Scheibler's polariscope, an imported mill for grinding samples, and about \$500 worth of platinum ware.

While the Station laboratory is not designed for the use of students, the work carried on there serves to illustrate actual practical analytical work.

The chemical department also has a collection of mineral specimens for class use, and quite a large department library of reference books and periodicals.

The gas supply for the department is furnished by a new, 200 light, Matthews gasolene gas machine, which is provided with an automatic mixer whereby the gas is kept uniform in quality.

The water supply for the department is furnished by a deep well on the college grounds, the water of which is of much better quality than most of the well waters of the valley.

#### FEES.

At the beginning of the work in chemistry in the Junior year, and also at the beginning of the work in the Senior year, each student will be required to deposit five dollars with the college Clerk, to cover breakage of apparatus. At the close of the year, or upon withdrawing from the class, the balance of the deposit, after deducting cost of broken apparatus, will be returned to the student.

At the beginning of each term, each student taking work in

assaying will be charged five dollars to cover cost of gasolene and fluxes used. None of this fee will be returned unless the student should withdraw before the end of the term. Besides the above fee of five dollars, each student taking assaying will be required to deposit ten dollars at the beginning of each term, to cover cost of crucibles, scorifiers, and other apparatus used up or broken during the term. The balance from this deposit which is not used will be returned to the student at the end of the term.

### ZOOLOGY AND PHYSIOLOGY.

T. D. A. COCKERELL.

*Elementary Anatomy.*—Freshmen, in the Agricultural and Scientific courses, devote five hours per week during the last term to the study of mammalian anatomy. The work consists in the dissection of typical mammals, cat and rabbit especially, followed by recitation on the work done. The object of this course is to give the students a clear understanding of the fundamental plan upon which all of the higher animals are constructed. In this work no text-book is used, but the students work from outlines put on the blackboard, and use Howell's Dissection of the Dog, Mivart's The Cat, and Wilder and Gage's Anatomical Technology, as reference books.

*Comparative Anatomy and Physiology.*—Sophomores, in the Agricultural and Scientific courses, devote five hours per week throughout the year to this work. They review the work of the previous term, and then take up the study of the other vertebrate animals and some invertebrates. They pay especial attention to the alimentary canal and its appendages. With the anatomy they study histology and physiology, paying especial attention to the physiology of digestion.

The aim of this course is to give the students a fair knowledge of the structure of animals in general and of the functions of their various parts. Nearly all the work is done in the labor-

atory, there being comparatively little recitation from books, except in the physiology. Martin's Human Body, Briefer Course, is used as the text-book in physiology, and the students are taught to consult various books of reference.

The work in anatomy and physiology is planned with especial reference to the needs of two classes of students; first, those who will have to study animal husbandry, etc., in the Agricultural course; and second, those who will teach science in the public schools.

*Entomology.*—Seniors in the Agricultural and Scientific courses will be required to devote five hours per week, during the first term, to the study of entomology. This course will give the students a general idea of the principal groups of insects and their modes of life, especial attention being given to injurious insects, and means of destroying them.

*Economic Entomology.*—Seniors in the Agricultural course will be required to devote five hours per week during a part of the last term to this subject. The work will be a continuation of that of the first term.

*Postgraduate Work.*—Every facility will be offered to students of graduate rank, whether of our own institution or from elsewhere, who may wish to conduct original investigations in the laboratories.

*Study of Scale-insects.*—Owing to laws recently made, and others about to be made, there is a considerable demand for expert examiners of fruit trees and nursery stock, who know the different scale-insects and similar pests when they see them. Special instruction is offered in the subject of coccidology, for periods of one term or longer, as may be desired.

*Equipment.*—This department occupies rooms in the second story of the new Science Hall. These laboratories are well equipped with Bausch & Lomb's compound "Model" microscopes, microtomes, water ovens, and other necessary apparatus. There is a set of Bock Steger models for illustrating human anatomy.

In addition to the college collections the students have ac-



cess to the Experiment Station collections, and also have the advantage of observing the work carried on by the Station. Students are held responsible for instruments and apparatus while in their charge.

The department library is well supplied with works on zoology, anatomy, and physiology.

## BOTANY, GEOLOGY, AND PHYSICS.

E. O. WOOTON, PROFESSOR.

*Botany.*—Juniors of the Agricultural and Scientific courses will devote five hours per week during the first term, and ten hours per week during the second term, to the study of botany. The work in this subject will be particularly designed to show the developmental history of plants. Types will be examined in the usual laboratory way, and students will thus become acquainted with the morphology and minute anatomy of plants and at the same time acquire a knowledge of those fundamental differences in structure which are the basis of all botanical classification.

*Economic Botany.*—A series of lectures and laboratory practices especially designed to acquaint students with the commoner parasitic fungi and best methods of counteracting their ill effects, will be given in the third term to Seniors in the Agricultural course.

*Elective Work.*—Seniors are required to elect a certain amount of laboratory practice, which shall generally be directly accessory to their thesis work. The botanical department will offer courses of investigation and more or less original research in plant morphology, physiology and systematic botany.

Original investigations in any of these branches of the subject may be elected by graduate students.

*Equipment.*—The laboratories of this department occupy rooms in the second story of the new Science Hall. These

laboratories are equipped with all apparatus necessary for the courses outlined above.

The department library is well supplied with books on all subjects relating to the work.

The herbarium contains several thousand plants, and additions are constantly being made. Advanced students, especially in systematic botany, will have access to it in connection with their work.

*Geology.*—The first term of the Senior year will be devoted to the subject of mineralogy, using Dana's work on this subject as a reference book, and the collection of minerals in the possession of the department as a basis for the work.

The remaining two terms of the Senior year will be devoted to the study of dynamical and historical geology, using Le Conte's Elements as a text-book. In connection with the latter subject, some work in elementary paleontology will be done, using the specimens in the cabinet.

*Physics.*—Sophomores of all courses are required to devote five hours a week throughout the year to this subject.

The first term will be devoted to the study of the general laws of matter and force, and the subject of heat; the second term, to electricity and magnetism; and the third term, to the subjects of sound and light.

Gage's Elements of Physics will be used as a text-book, with Ganot's Physics and Sylvanus Thompson's Elementary Lessons in Electricity and Magnetism as reference books. Particular stress will be laid upon the mathematical side of the subject, as being the best way to grasp its principles.

The department has good room accommodations and is fairly well equipped.

## ENGINEERING.

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FRANK W. BRADY, PROFESSOR.

CHARLES MILLS. INSTRUCTOR IN SHOPS.

This department offers two regular courses, each four years in length, Mechanical Engineering, and Civil Engineering.

Instruction is given by lectures, recitations, and practice, so combined as to constitute a symmetrical course of study. The endeavor is to provide the student with a broad foundation of general and theoretical knowledge, together with a liberal amount of practice in the line of his chosen profession.

The mechanical students confine themselves to shop work and mechanical drawing, while the students in civil engineering undertake instead, surveying operations, mapping, and topographical drawing.

In each course, much time is necessarily devoted to higher mathematics and to technical subjects; yet certain other fundamental studies, necessary to a broad and liberal education, such as history, political economy, languages, literature, chemistry, and elocution, are amply provided for.

In the Mechanical Engineering course the student is given a thorough training in the theoretical branches underlying the science of machines, together with a clear understanding of the practical construction of mechanical devices. In addition to the advanced mathematical and general studies common to other courses, this course includes instruction in free-hand and mechanical drawing, descriptive geometry, theoretical and applied mechanics, hydraulics, engineering structures, electrical engineering, strength of materials, mechanism, machine design, steam engineering and shop practice.

*Free-hand Drawing.*—The importance of free-hand drawing as a discipline for the powers of observation, can hardly be over-estimated. It educates the eye to note accurately all details of position and form, and trains the mind and hand to re-

produce correctly what the eye sees. All Freshman students are required to take free-hand drawing, five hours per week, for the first two terms.

*Mechanical Drawing.*—All engineering students take mechanical drawing in the third term of the Freshman year and in the first and third terms of the Sophomore year. This subject embraces instruction in the use and care of drafting instruments, exercises in geometrical construction, lettering, plane projections, shading and coloring; followed by detail and assembled working drawings of machinery, with tracings and blue prints therefrom.

Throughout the Junior and Senior years, mechanical drawing is merged into machine design, of which it forms an important part, and affords constant opportunity for further practice in making detail working drawings of standard types of machinery.

*Machine Design.*—This work is done principally in the drafting room, and consists in the design of the elements of machinery, such as nuts and bolts, rivets and riveted joints, journals and bearings, pulleys, gears, etc.

*Descriptive Geometry* is taught to all students in the Engineering courses. The principles of orthographic projection, developments of lines and surfaces, etc., are fully discussed in the class room; and a great variety of problems, illustrating both general and special cases, are solved and constructed by the student.

*Mechanics.*—The general laws of statics and dynamics are studied with reference to solids, liquids, and gases; and the fundamental principles are applied to the solution of a wide range of problems.

*Mechanism.*—Under this head are studied the principles underlying the action of the elementary combinations of which all machines are composed; the communication of motion by gear-wheels, belts, cams, screws, and link-work, etc.

*Hydraulics* includes the study and application of the principles of the subject to the various problems involved; such as,

the flow of water through orifices, short and long tubes, conduits, and in open channels; gauging of streams, measurement of water power, etc.

*Engineering Structures.*—This subject embraces a study of the design and construction of foundations and superstructures, the selection of materials, superintendence, specifications, etc.

*Strength of Materials.*—This subject includes the study of the characteristics, method of manufacture, and useful properties, of the various materials of construction; and an investigation of their strength, elasticity, and other physical properties.

*Steam Engine.*—The student makes a study of the general principles of the steam engine and the various types of engines and boilers in common use, and investigates the many problems relating to their structure and efficiency.

*Roofs and Bridges.*—In roofs, bridges, and arches, the students will be given a thorough drill in determining stresses by analytical and graphical methods; and in the details of construction.

*Electrical Engineering.*—This subject embraces a study of the fundamental principles of electric power generation and the application of electricity to lighting, and in street railway and mining work.

*Shop Practice.* offering, as it does, practical illustrations of the precepts taught in the class room, is a most essential part of the Mechanical Engineering course, and this work is given a prominent position. At the same time, it is believed that this training is valuable for men in every walk of life. Accordingly every male student in the regular college courses is required to take Shop Practice during the Freshman year. This work consists of one term in carpentry, one in wood turning, and one in blacksmithing. For the regular Mechanical Engineering students, the manual training will continue four years, and will embrace, in addition to that in the Freshman year, foundry work and pattern making and general machine work.

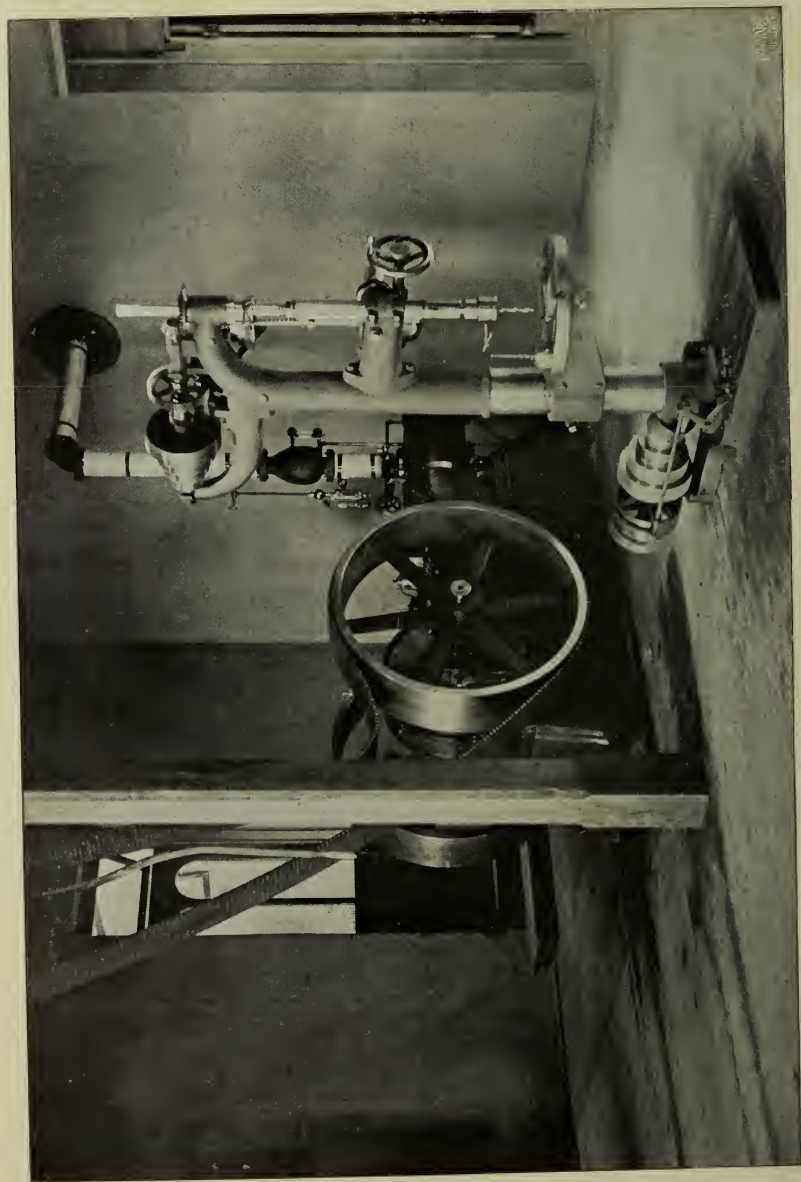
*Equipment.*—The department has two commodious buildings devoted exclusively to its work. One has rooms for black-





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ENGINE IN THE MACHINE SHOP

smith shop, foundry, and storage. The other contains two recitation rooms and a hall, an engine and boiler room, and rooms for wood work and for machine work.

In the forge room are six forges of the latest model, with improved underground arrangements of the blast and exhaust pipes. Each forge is fitted with a full assortment of tongs, hammers, swages, fullers, etc. An 18-inch drill press and a punching and shearing machine form a part of the outfit of this section.

The wood room has seven turning lathes, one combination rip and cross-cut circular saw, one Fox trimmer, a forty-inch grindstone, one 18 inch x 6 inch surface planer, one No. 3 patent strain scroll saw. and a good supply of small tools and appliances.

In the machine room, there are one 16 inch x 6 foot tool room lathe with compound rest and taper attachment, one 14 inch x 8 foot standard engine lathe, one 24 inch x 24 inch x 6 foot planer, one 22 inch power drill press, one improved emery wheel grinder; also a large number and good assortment of chucks, drills, small tools, and machine attachments. A 12-H. P. 110 volt dynamo and 8-H. P. motor with switch board instruments, and also a standard steam gauge tester, have been purchased for additional machine room equipment.

A well-arranged tool room contains supplies and a good assortment of special tools for general work.

The power equipment consists of one 8-H. P. Shipman engine and boiler, one 30-H. P. Weston automatic engine, one 40-H. P. tubular boiler, feed water purifier, duplex pump, and a Rumsey deep-well pump.

*Surveying.*—The instruction will be such as to render the students familiar with the principal instruments and methods used in plane, topographical, trigonometrical, hydrographic, city, and railroad surveying. Surveys will be made, notes plotted, and areas computed. Students will have practice in

determining the true meridian and latitude, by observations of the north star and of the sun.

*Equipment.*—The equipment consists of a surveyor's compass, two surveyor's transits, one of which has a gradienter and solar attachment, engineer's level, plane table, aneroid barometer, hand level and clinometer, optical square, pantograph, chains, steel tapes, leveling rods, poles, etc.

An excellent department library, containing standard works on subjects pertaining to the engineering profession is accessible to the students.

*Deposits.*—Students taking any of the practice work, (exclusive of chemistry) in the Engineering courses will be required to deposit at the beginning of the work each year five dollars, to cover breakage or damage, and to make an additional deposit at any time it becomes necessary to meet the expenses so caused. At the end of the year or on completion of the work, the amount not forfeited will be returned.

#### THESIS.

As a condition of graduation, each Senior in the Engineering courses must prepare an acceptable thesis and thesis drawing which shall remain the property of the College.

### MATHEMATICS AND ASTRONOMY.

C. T. HAGERTY, PROFESSOR.

*Geometry.*—The Freshman class study plane geometry in the first and second terms, and solid and spherical geometry and a brief treatise on conic sections in the third term. Original exercises form a large part of the work throughout the year, and constitute an important factor in examinations. Wentworth's Plane and Solid Geometry is the text-book used.

*Algebra.*—All students admitted to the Freshman class have completed algebra through quadratics in Milne's High School Algebra, or an equivalent. The advanced algebra taught

in the third term of the Freshman year, embraces the following subjects: ratio, proportion, variation, progressions, indeterminate equations, inequalities, and logarithms. At the beginning of the term some time will be devoted to a review of the more difficult portions of elementary algebra. In the third term of the Sophomore year, higher algebra is taught, which includes permutations and combinations, undetermined co-efficients, binomial theorem (any exponent), scales of notation, variables and limits, theory of numbers, series, and theory of equations.

*Trigonometry.*—Plane trigonometry is taught in the first term of the Sophomore year; and spherical trigonometry, in the second term. The functions are treated both as ratios and lines. The fundamental formulæ are carefully deduced, and many practical problems are solved. In order to get a clear conception of the measurement of angles, students use protractors, trigonometer, and a surveyor's transit.

*Analytic Geometry.*—All students in the Engineering courses are required to study plane analytic geometry in the first term of the Junior year. They solve many problems in order to become familiar with the methods of the subject. Several of the higher plane curves and geometry of three dimensions are studied in the first five weeks of the second term.

*Calculus.* Engineering students are required to study the differential and integral calculus in the last seven weeks of the second term of the Junior year, and throughout the third term. The method of rates is employed.

The Scientific students are not required to pursue the mathematical studies after the Sophomore year, but they may if they desire to do so.

The instruction in all branches of mathematics is made as practical as possible.

*Astronomy.*—A knowledge of plane and spherical trigonometry, conic sections, and elementary mechanics is necessary to a full understanding of this branch, as the work is not only descriptive and historical in character, but also spherical and prac-

tical. Students are required to observe carefully the phenomena presented to them by the heavens. They have practice in solving a variety of astronomical problems from data obtained by themselves with a surveyor's transit.

*Equipment.*—This department has a portable equatorial telescope with 5-inch objective and magnifying powers ranging from 100 to 400, a surveyor's transit with solar attachment, planisphere, star lantern with slides, field glasses, star atlas, protractors, trigonometer, 24-inch slated globe, and Kennedy's dissected geometrical blocks.

The department library contains many valuable books of reference, and several periodicals.

## POLITICAL SCIENCE.

C. T. JORDAN, PROFESSOR.

*Political Science.*—The elements of civil government having been studied in the Sub-Freshman class, constitutional and political history is taught to the students of the Scientific and Agricultural courses, in the second term of the Sophomore year. Johnston's American Politics and Constitution of the United States, and Burgess's Political Science, are the text-books used. Cooley's Principles of Constitutional Law is studied by the Junior's of the Scientific and Agricultural courses, in the third term.

*Political Economy.*—This subject is pursued during the first term of the Junior year. Instruction will be given by means of recitations and lectures.

The current practical problems of industrial society are also discussed on the basis of economic principles. Each student will be required to prepare an original paper upon some topic which will be assigned him.

Ely's Political Economy is used as a basis, but the students



are required to read extracts from a number of standard authors, among whom are Adam Smith, Fawcett, Walker, Thompson, Bowen, Wayland, Perry, Laveleye, and Mill.

## HISTORY AND PEDAGOGY.

HIRAM HADLEY, PROFESSOR.

*History.*—The purposes aimed at in this department are: (1) to give an idea of the great lines of historical development; (2) to discover the ideas which organize the historical movements; (3) to stimulate self-directed investigation; (4) to train the judgment in the discrimination of motives and the results of action; and (5) to inspire the student with a desire to be something more and better than a passive observer in the progress of humanity.

History of the United States is completed in the Sub-Freshman class. For admission to the Freshman class, a knowledge of this subject equivalent to that given by the texts of Montgomery, Johnston, or Thomas is required.

History in the College courses consists of the following: General history, embracing ancient mediæval, and modern, so far as is possible in the time allotted, will be pursued by all students in the Freshman class during the first two terms; history of education, which constitutes a portion of the work in pedagogy, will be pursued by students in the Agricultural and Scientific courses during the third term of the Junior year; and history of civilization will be pursued by students in the Agricultural and Scientific courses during the second term of the Senior year, three periods per week.

The texts used are as follows: In general history, Fisher's; in history of education, Painter's; in history of civilization, Guizot's.

The library contains a fair representation of the literature on these several phases of history. Students have free access



to this, and they will be assisted in making an intelligent acquaintance with it, to the end that they may make independent investigations of historical topics.

*Pedagogy.*—It is not the intention of the Board of Regents and the Faculty to give this subject great prominence, at present. But experience has shown that many of the students of this college engage in teaching, to a greater or less extent. It is believed that duty to these and to the common schools of the Territory requires that opportunity should be afforded for furnishing an introduction to the science of teaching. To this end the following provisions have been made: The elements of a course in pedagogy will be given to students in the Scientific course, and, by approval of the Faculty, to such others as may desire. During the Sophomore year, the following will be presented: In the first term, the simpler elements of psychology—those essential to an intelligent understanding of the science and process of teaching; in the second, methods, embracing particularly the method of the recitation; in the third, school management.

This work will be continued during the Junior and Senior years as follows: In the third term of the Junior year, students in the Agricultural and Scientific courses will take history of education. The text used is Painter's. In the Senior year, students in the Scientific course will have more advanced psychology during the first and second terms, and general pedagogy during the last term.

## ENGLISH AND LATIN.

E. F. BARKER, PROFESSOR.

*English.*—Freshman Year.—1st Term.—Lockwood's lessons in English. Frequent written exercises are required. These exercises consist of dictations, reproductions, and carefully prepared compositions. Parallel reading: The Legend of Sleepy

Hollow (Irving), and The Vision of Sir Launfal (Lowell).

2nd Term.—Lockwood's Lessons in English. The work of this term is similar to that of the first term. Parallel reading: The Sir Roger de Coverley Papers (Addison), and Snow Bound and other poems. (Whittier). In the Scientific course women take literary reading, as a practice, five hours a week, in the place of wood turning.

3rd Term.—Lockwood's Lessons in English. The work of this term is similar to that of the first term. Parallel reading: Gulliver's Travels (Swift), and The Prisoner of Chillon (Byron). In the Scientific course women take literary reading, as a practice, five times a week, in the place of blacksmithing.

(Class meets three times a week during first and second terms, and twice a week during third term).

Sophomore Year.—1st Term.—Newcomer's Composition; Genung's Rhetoric. Parallel reading: Hero as a Prophet (Caryle), Essay on Criticism (Pope), and Deserted Village (Goldsmith).

3rd Term.—Newcomer's Composition; Genung's Rhetoric. Parallel reading: Macaulay's Essays.

(Class meets five times a week during first term, and four times a week during third term.)

Junior Year.—1st Term.—In this term the systematic study of English Literature is taken up, using Swinton's Studies in English Literature as a text-book. Students are required to prepare several original papers on subjects closely connected with the regular class work in English Literature. The students of the Scientific course take literary reading as a practice, seven hours a week.

2nd Term.—The students of the Agricultural and Scientific courses take up the study of advanced English grammar, using Bain's Higher English Grammar as a text-book. Special attention is also given to the analysis of two of Shakespeare's plays. The composition work is upon the plays read.

3rd Term.—The work of this term is a continuation of that

done in the first term.

(Class meets three times a week during first and third terms, and five times during second term).

Senior Year.—2nd Term.—Trench on the Study of Words; Lounsbury's History of the English Language. In this class, the historical study of the English language is taken up. Outlines and summaries are prepared, and the students are exercised in taking notes during lectures. Five compositions and three essays, on subjects assigned, are required.

(Class meets three times a week).

3rd Term.—Class meets once a week for the purpose of receiving special instruction and criticism on orations.

Rhetorical Exercises.—Freshman and Sophomore students are required to appear in public once a year; Junior and Senior students, twice a year.

*Latin*.—This is regarded as a foundation study for mental discipline. The subjects embraced in this department are the Latin Language and Literature, Roman History, and Mythology. The Roman pronunciation is used. In the Freshman year, students are expected to acquire a thorough knowledge of the declensions, of the conjugations, and of the elements of Latin syntax. Daily exercises are given in translating Latin into English, and English into Latin. The students are drilled in the analysis of the texts read. The classes recite five times a week.

Freshman Year.—Heatley's *Gradatim*; Bullion's *Latin Reader*; Harkness's *Latin Grammar*.

Sophomore Year.—Caesar's *Gallie War*; Harkness's *Latin Grammar*.

Junior Year.—1st Term.—Sallust. Allen and Greenough's *Grammar*. Prose Composition, and Roman History.

2nd Term.—Cicero's *Orations*. Allen and Greenough's *Grammar*, and Prose Composition.

3rd Term.—Two books of Virgil's *Aeneid*. Allen and Green-

ough's Grammar, and Prose Composition. Lectures on Roman literature, mythology, and Latin metres.

## SPANISH.

IDA M. JONES, PROFESSOR.

As may be seen from the courses of study, Spanish is optional with Latin in all the courses throughout the Freshman and Sophomore years; and in the Junior year in the Scientific course, it is optional with higher mathematics and Latin.

Situated, as this College is, near the border of the Republic of Mexico, with Spanish in common use among the majority of our people, the opportunity here afforded to acquire a working knowledge of this language is certainly excellent, and should be improved by all who expect to enter upon any field of labor among the Spanish-speaking people.

In the time allotted to this study, a fair knowledge of the language may be obtained.

The elements of the language are acquired by the study of De Torno's Combined Method with Worman's First and Second Books. Conversation and sight reading will be given twice a week with additional work in dictation.

The work in the Sophomore year will consist of translations of Cortena's Amparo, oral and written translations of English selections of various styles. Spanish idioms, and the study of Knapp's Grammar.

In the Junior year the students will be required to do private reading from Cervantes, Calderon, Moratin, and others. Translations of Moratin's comedy, *El si de las Ninas*, selections from *Don Quixote* and *Gil Blas*, the writing of business letters, and the study of Spanish literature, will be included in this year's work.

The following books of reference are accessible to the stu-

dents: Sales' Grammar, Becker's Spanish Idioms, Ticknor's History of Spanish Literature.

## ELOCUTION AND PHYSICAL CULTURE.

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ELLEN F. GIBSON, INSTRUCTOR.

Systematic instruction will be given in reading, particular attention being paid to articulation, inflection, and emphasis.

Voice culture will include tone development and projection. Students who have received one year's training here, and who have natural talent for elocution, are received as Seniors in the Boston College of Oratory.

The physical culture will include the Delsarte System of physical culture and gesture, as well as the Swedish System of gymnastics and free gymnastics; and is designed to develop gracefulness of carriage, ease of appearance in public, freedom of movement, as well as greater bodily vigor, and better health.

Lessons in physical culture will be given daily, and elocution lessons twice every week throughout the course.

## MUSIC.

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Arrangements will be made so that all students who desire to take either instrumental or vocal music may do so in a department distinct from the College as to the payment of fees, but under such rules and regulations as the Faculty may make. Instrumental music will be confined to the piano and organ. Fees for music will be about what are usually paid in good schools.



## **BUSINESS DEPARTMENT.**

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In view of the facts that the demand for instruction in commercial courses is great and increasing, and that such training is of the most useful and practical character, the Board of Regents has established a Business Department in this College. In order that this department may not interfere with the regular college work, it has been found necessary to make it separate and distinct, to require a certain standard of admission, and to have definite courses of study. This department includes two courses, each complete in itself; namely, Course in Stenography and Typewriting, and Course in Bookkeeping.

Students will not be permitted to devote their time exclusively to stenography or bookkeeping, unless they can show to the satisfaction of the Faculty that they have completed the additional studies named in that Business Course they are pursuing.

### **REQUIREMENTS FOR ADMISSION.**

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Students, sixteen years of age, who have completed the work of the Sub-Freshman class, and graduates of any commissioned high school in the Territory, will be admitted to the course in Stenography and Typewriting without examination. All other applicants will be examined.

Students, fifteen years of age, who have completed the work in the Preparatory Department of the college, will be admitted to the course in Bookkeeping without examination; also those students who can produce a certificate from the principal of any commissioned high school or graded school in the Territory that



work equivalent to that done in the Preparatory Department has been completed satisfactorily. All other applicants will be examined.

It is believed that these courses offer much for those who desire this kind of training. All students of the Business Department enjoy the same library privileges as the college students.

### COURSES OF STUDY IN BUSINESS DEPARTMENT.

	STENOGRAPHY AND TYPEWRITING.	BOOKKEEPING.
1st Term	Spanish or English.....5 Stenography.....5 Penmanship.....5	Commercial Arithmetic.....5 Grammar.....5 Bookkeeping.....5 Penmanship.....5
2nd Term	Spanish or English.....5 Stenography.....5 Spelling.....5	Commercial Arithmetic.....5 Grammar.....5 Bookkeeping.....5 Spelling.....5
3rd Term	Spanish or English.....5 Stenography.....5 Office Work.....5	Commercial Law.....5 Grammar.....5 Bookkeeping.....5 Spelling.....5 Rapid Calculation.....5
	PRACTICE—Stenography, each term..5 Typewriting, each term..5	PRACTICE—Bookkeeping, each term..10

(NOTE—The figures denote the number of hours per week devoted to recitation and practice.)

Upon completion of either of the courses a Certificate will be given.

### STENOGRAPHY AND TYPEWRITING.

F. E. LESTER, INSTRUCTOR.

The principal object of the course in Stenography and Typewriting is to thoroughly qualify the student to become a prac-

tical shorthand and typewriting amanuensis, so that at the completion of the course he may be prepared to accept a position as such. Naturally, the larger portion of the time of the student pursuing this course is devoted to stenography and typewriting. In all three terms, two hours a day are devoted to stenography and one to typewriting, and in the third term one hour a day is devoted to office work. The remaining studies pursued in this course are such as to strengthen the student in those subjects which are more or less necessary to the competent stenographer, and together call for about two hours a day additional to the work in stenography and typewriting. They comprise English or Spanish, penmanship, and spelling.

A strong and commendable feature of this course is the provision made for the study of the Spanish language. This may be followed throughout the whole year, devoting one hour a day to the subject. The experience of the past four years has shown that the demand for Spanish-speaking stenographers is greater than the supply, and every student who has successfully completed the course in stenography and has also been a master of the Spanish language has, without difficulty, secured a desirable position. Furthermore, in every case the student has found no difficulty in adapting his knowledge of shorthand for use in taking Spanish dictation. The instruction in Spanish is specially adapted to commercial use. Where the student does not take the work in Spanish, provision is made for devoting the time to the study of English.

A good English education is an absolute necessity to the student in shorthand; without it he can never succeed. It is the foundation upon which all his stenographic acquirements rest. Too much stress cannot be laid upon this fact, for it is probable that in the great majority of cases, the all-too-common incompetent stenographer of to-day fails because of imperfect preparation for his work and a deficient general education. It is, therefore, required of all students entering the course that they shall

have completed the work in the Sub-Freshman class, or its equivalent.

It will be seen that this course is one calling for a good preparation and an unusual capacity for hard work, and the student who wishes to enter this course must be able to fill both of these requirements. The average student cannot become a proficient amanuensis in less than the nine months required in the course.

*Shorthand.*—Much care has been taken in the selection of what is thought to be the best system of shorthand available, for the success of the shorthand student depends largely upon his faith in the system he studies. The superiority of Graham's Standard Phonography, which is the system taught, has been proved conclusively by recent investigations, which have revealed the fact that more than 50 per cent of the official court reporters in the United States are Graham writers. The text-book used is the new edition of Graham's Handbook, supplemented by other works.

The work of the year's course is divided into three parts. The first term is devoted to the elementary grade—a study of the principles of shorthand; the second term, to the intermediate grade—covering word-signs and drill in correct outlines; and the third term, to the advanced grade, in which the student confines himself largely to dictation in business correspondence, literary and general matter. Particular attention is given to correct business forms, commercial expressions, and legal matter, and to careful training in the best outlines, by which alone a high rate of speed can be attained.

*Typewriting.*—The requirements of modern business demand only the expert typewriter operator, and the work of this course is such as to qualify the student to become such. The four-finger method is taught, and a complete text-book—Torrey's Practical Typewriting—studied in connection therewith. The practical work includes fingering, touch, copying, letter writing, legal and commercial forms, spelling and punctuation.

writing from dictation, mechanism and care of the machine, speed exercises, and transcription from shorthand notes. In the third term, one hour a day is devoted to office work, which includes thorough practice in letter-press copying, indexing and filing of names and letters, carbon and hektograph duplicating work, and mimeographing.

The department is equipped with the best machines. Four New Model No. 6 Remington machines, one No. 2 Remington, and one New Model Smith Premier, comprise the equipment. Every student is given thorough drill on both the single and double keyboard machines.

*Positions.*—No guarantee is given to any student entering this course that he will secure a position upon its completion. There is little doubt, however, of any student satisfactorily completing the course being able to secure a position. Every student who has satisfactorily completed the course in the past, and whose general education has been good, has secured a position.

A Certificate is given to students satisfactorily completing the course and passing an examination, the requirements of which are to be able to take from dictation ordinary business letters at the rate of 100 words per minute and transcribe the same from notes correctly on the typewriter at a minimum speed of 25 words per minute.

A small charge is made at the close of the year for material used by the student in his office work.

## BOOKKEEPING.

JOSEPH F. BENNETT, JR., INSTRUCTOR.

It is not the aim to find in how short a time the student may be fitted for the duties of the counting room, but rather to train and equip him in such a manner that he may be able to meet the exacting demands and to perform the duties of accounting in modern commercial life. Practical and systematic work,

and rigid inspection and examination of books, letters, and papers relating thereto, will characterize the work. Both double and single entry will be taught.

In theoretical bookkeeping the student is made familiar with the first principles of the science of bookkeeping. He is guided carefully until he can master the simpler forms of the day book, journal, cash book, and ledger, and can post and close a ledger correctly. Frequent exercises and class drills are given in journalizing and closing ledgers. Thus the student will gradually be required to master all forms and sets of books in the various lines of business, embracing single partnership, co-partnership, joint stock companies, corporations, etc.

Theory and actual business practice will be so proportioned and combined as to produce the best practical results. Lectures and exercises will be given throughout the course on opening and closing books, auditing books and higher accounting.

*Penmanship.*—The primary object of writing is, that it may be easily read. Next in order to legibility is rapidity. Business writing is taught in an interesting and systematic manner. The latest and most approved methods and systems will be used. No one branch of study in the Bookkeeping course is comparatively of greater importance than penmanship.

*Commercial Arithmetic.*—This subject will be taught throughout the Bookkeeping course. Mathematical accuracy, rapidity, and efficiency in the counting-room are absolute requisites in our present business life. Those processes, commonly called "lightning calculations" will be taught and practiced throughout the work.

*Commercial Law.*—The work will be carried on by lectures and recitations. The purpose is to give a clear insight into the laws governing business transactions so that the student may be enabled to distinguish between legal and illegal contracts; may learn how to draw up various legal documents; and know the laws of negotiable paper, agency, partnership, corporations,



joint-stock companies, real estate conveyances, interest guaranty, insurance, shipping, etc.

*Spelling.*—Special attention is given to the subject of spelling. Commercial terms will be one of the features.

*Grammar and Letter Writing.*—Instruction will be given throughout the year in grammar and letter writing to the students of this course. The end to be attained is the easy and correct use of English.



## COLLEGE SOCIETIES.

### COLUMBIAN.

This Society was organized October 25, 1891, under the name of Alpha Chi. In 1892 this was changed to Columbian, and under this name the society has made steady and prosperous growth. Until about the middle of 1894-95 only men were admitted as members, but since that time the women have had equal membership privileges. The object of the society is to promote and encourage conscientious and practical literary work by discussions, papers, debates, and such other exercises as the committee on program may prescribe. The requirements for admission to the society are that applicants must be students of good standing in the College and must pay an entrance fee of one dollar. Dues of fifty cents must be paid each succeeding term. Regular meetings are held each week.

#### OFFICERS.

W. E. Holt.....	President.
I. H. Stanley.....	Vice President.
Helen Macgregor.....	Rec. Secretary.
E. E. Winter.....	Cor. Secretary.
C. Thompson.....	Treasurer.
Helen Macgregor.....	Librarian.
Lottie Sweet.....	Critic.
Ivah Mead.....	Vice Critic.
Maude McFie.....	Marshal.

The New Mexico COLLEGIAN is published and managed by the Columbian Literary Society. It was founded in February, 1893, and has been published regularly since that time. Five excellent Commencement numbers have been issued. It is an eight to twelve page journal and contains contributions from students, besides the matter usually found in college publications. It is issued about the first of each month during the collegiate year, and has a good circulation throughout the Terri-

tory, and one which is constantly increasing.

The interest of students in the journal has grown considerably since it was founded, and it appears to be especially valued by those who leave college, serving as it does to keep them in close touch with the institution and with their college friends. The COLLEGIAN is now self-supporting, and has every prospect of being a successful journal. It will be enlarged and improved in the future as the support given it may warrant. All work in connection with its publication is entirely gratuitous. The subscription price is one dollar a year.

COLLEGIAN STAFF.

*E. E. Casey,	.....	Editor-in-chief.
†W. Alex Sutherland,	.....	Editor-in-chief.
I. H. Stanley,	} .....	Associate Editors.
Frede Peacock,		
W. E. Holt,		
W. C. Meeker,		
Chas. E. Mead,	.....	Business Manager.
Lottie Sweet,	.....	Exchange Editor.
E. E. Winter,	.....	Local Editor.

P. S. AND W. E. SOCIETY.

This society was organized September 10, 1896, by some girls of the Freshman class, and the membership was originally drawn exclusively from that class; later a few others were admitted by special vote. The object is general improvement and the cultivation of a true college spirit. The exercises consist of debates, essays, recitations, readings, book reviews, and general topics. Girls only are eligible to membership.

The following are the officers:

Fannie French,	.....	President.
Nora Newberry,	.....	Vice President.
Mary Wickham,	.....	Secretary.
Blanche Bailey,	.....	Critic.
Lizzie Coleman,	.....	Marshal.

\*Resigned May, 1898.

†Elected May, 1898.

## ATHLETIC ASSOCIATION.

The growth of the Athletic Association has more than kept pace with the College. The number of members was greatly increased over that of last year. So far, football, baseball, and tennis have been made the principal college sports.

The Sixth Annual Field Day was held on May 6th. The program consisted of the principal sports, which were very hotly contested. Gold medals were awarded to the winners in the different events. The officers for 1897-98 are as follows:

C. E. Mead.....	President.
E. J. Coe,.....	Rec. Secretary.
I. H. Stanley.....	Treasurer.
R. F. Broyles,.....	Manager Gymnasium.
E. E. Casey.....	Manager Football.
D. G. Cravens.....	Manager Field Day.
C. T. Hagerty.....	Manager Tennis.
Bert Roberts.....	Manager Baseball.

Executive Board: C. E. Mead, E. J. Coe, E. E. Casey, I. H. Stanley, W. A. Sutherland, D. G. Cravens, W. E. Holt, and C. M. Barber.

## SCIENCE CLUB.

This club was organized about the middle of last term and had several enthusiastic meetings. Its object is to investigate the natural phenomena of the surrounding country and to promote, in the community, an interest in science. Although the club was organized by college students, any person interested in science is eligible to membership. Two regular meetings are held each month.

### OFFICERS.

Charles Melvin Barber.....	President.
Charles E. Mead,.....	Vice President.
Ivah Mead.....	Secretary.

## GENERAL INFORMATION.

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The College of Agriculture and Mechanic Arts offers a great deal to the young people of New Mexico. Every effort will be made to acquaint the people of the whole Territory with its purpose and work. Its courses of study are now equal to those of similar colleges in most of the older states. Students can now get a practical education here in any line they may desire. New schools generally make greater efforts than the older ones, and the energy put forth and the instruction given are often superior. There are a great number of students sent from various parts of the Territory each year to eastern colleges. We ask parents who do this, to investigate this college; and we believe if they will do so, it will get a share of their patronage, and that our people will manifest, in an increasing degree, their appreciation of the bounty of the United States and of the Territory here dispensed. We know it is better fitted to do good work than some of the eastern schools patronized by our people.

Mesilla Park, N. M., is the postoffice and also the general freight and express office of the college.

Strangers will find it more convenient to stop at Las Cruces, and go temporarily to some hotel. They should then report to the president, who will assist them in finding a boarding place.

Students should be on hand the first day of the term. The necessity of this is too seldom realized. New students and those desiring re-examination should report on the day named for this work.

### TEXT-BOOKS.

Text-books are furnished by the college. They will either be sold to the student at cost, or they will be lent. Students

are required to deposit \$2.50 in advance, to secure the proper care of college property and the prompt return of books borrowed. At the close of the year, or when the student withdraws, this deposit is returned unless damage has been done to the books or other college property. When this is the case the damage is assessed against the student, and any balance remaining of his deposit returned.

This deposit may be increased with students who are notoriously careless. Students who are able should purchase their books. Many of them will be needed after leaving school and they can be made to form the nucleus of a library, which every student should be encouraged to collect.

#### STATIONERY.

As the college is distant about two miles from any store dealing in stationery, it has been found necessary for the accommodation of students, to carry at the college a small line of articles, such as paper, pencils, pens, etc., which are sold to students, for cash only, at a small profit.

#### FEEES.

Entrance fee, each year, for all students.....	\$5.00
Deposit fee     "     "     "     "     "     " .....	2.50
Students in Chemistry, deposit.....	5.00
Students in Engineering, deposit.....	5.00
Students using horse stalls, per term.....	.25
Students not citizens of the United States, per term.....	8.50

All fees must be paid in advance.

#### BOARDING AND OTHER EXPENSES.

We hear much said nowadays as to the cost of education. Many parents would gladly give their children a college education if they felt able to do so. The cost of travel in a large Territory is great, but this is offset by free text-books and practically free tuition. The cost of clothing is something; but



students should be taught to dress inexpensively, yet neatly. Clothes cost a certain amount whether in school or at home. The cost of board at home is something, though this is seldom taken into consideration. Students need but little pocket money and the social demands on all students are light. If young people whose parents are unable to assist them, really want a college education, they can find a way to secure it, though it be but a term at a time. There is a greater demand for labor in New Mexico than in the East; most kinds are better paid; and any young person with sufficient energy and ambition, can, in time, work his way through college.

As yet the college can do nothing toward furnishing board and rooms for men. Students, so far, have secured board and lodging in private families near the college at from \$15 to \$20 per month. Some students have taken rooms and boarded themselves at greatly reduced cost. In the West, where many boys have learned to cook, this plan has great advantages for those of limited means. A year's boarding by this plan, including room, should not exceed \$80; and yet the student can have plenty of good, substantial food, and a comfortable room. A number of students have boarded themselves for \$7.50 to \$8.00 per month during the past session. This included room rent. Boarding clubs may be formed by students, and this is often a very good plan. With careful management this plan will reduce the cost of board and lodging to about \$150.00 a year. Washing will cost each student from \$1.00 to \$2.00 per month. Students who propose to furnish their own rooms should provide for this before leaving home. The freight on such articles as will be needed and can usually be spared from home will be light. It is not economical either to rent or to buy.

As may be seen, a student can get through the year by self-boarding for about \$80.00; can board in a club and get through the year on from \$150.00 to \$175.00; and can board in a private family and expend from \$200.00 to \$250.00, according to his taste and means. We believe that expenses here, (where free



text-books and almost free tuition are given) will not run higher than in other institutions of similar character. Within reach of the college buildings are houses for rent at reasonable prices. Many families have moved here and resided in these or on rented ranches in the vicinity in order to give their children an opportunity to attend college. Whenever parents can do this, it should be done, as perhaps no other plan is so satisfactory.

#### GIRLS' DORMITORY.

The Girls' Dormitory, situated on the College farm, will accommodate about thirty students. The price of board per calendar month, with room, light, heat, and the washing of a dozen pieces including house linen, is fifteen dollars, payable in advance on the first of each month. The rooms are comfortably furnished, but each student must provide comforts, blankets, sheets, pillow slips, towels, napkins, napkin ring, and two laundry bags. The student's name must be plainly marked on all pieces.

The students are under the general supervision of the Faculty, and in charge of the matron, Miss Ida Freeman.

For further particulars apply to the matron.

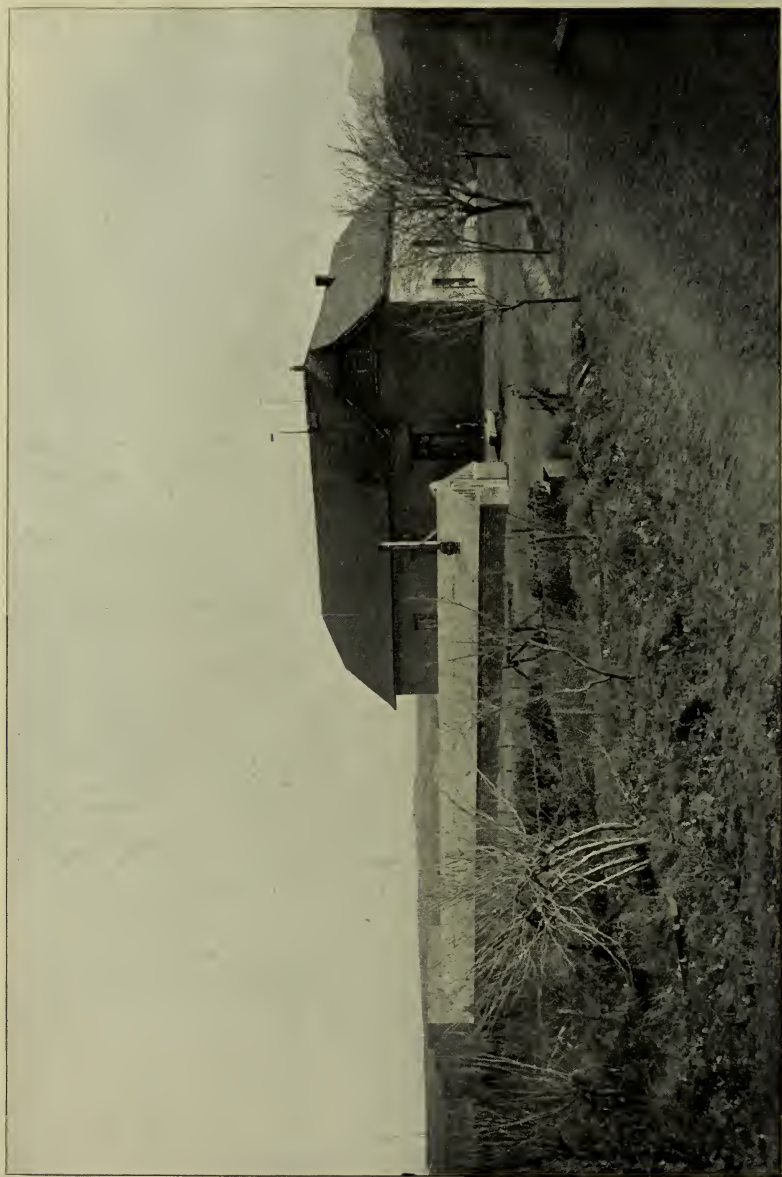
#### PAID LABOR.

There is a considerable amount of paid labor on the farm, in the shops, and in the laboratories, that can be performed by students; and the policy will be to give it to students rather than to others. Some students have been able to earn enough during the past year to pay their expenses; but those doing so have had constant employment in some subordinate position. The college can not undertake to furnish work for all students who wish it, or need it, in anything like sufficient amount to pay expenses; and even if it could, the student's time is needed chiefly for study, recitation, and practice. Still many worthy and industrious students pay a considerable part of their expenses by labor, which is given to those who are most trustworthy and meritorious; and who are regular and punctual in

GIRLS' DORMITORY



MANZ  
CHICAGO



GREENHOUSE AND FARM BUILDINGS

attendance, and correct in deportment. This labor is paid for at the rate of from 10 cents to 20 cents per hour; but the Faculty reserves the right to limit the amount of work any student may do.

#### DISCIPLINE.

It should be impressed upon the youth of New Mexico that by the creation of the College of Agriculture and Mechanic Arts there has been provided for them the fullest and best opportunity to secure a practical education. Students who enjoy the advantages here offered, should be made to realize that to forfeit these privileges on account of their misuse or abuse is a matter of the most serious concern to them.

If, after a fair trial, the influence of any student is found to be detrimental to scholarship, morals, or good order, dismissal will follow. The following are strictly forbidden:—

1.—The indulgence in the use of intoxicating liquors and the frequenting of questionable resorts.

2.—The use of tobacco in any form in or about the college buildings.

3.—All indecent behavior and profane language.

#### RELIGION.

All students will be trained in the principles of morality, but no sectarian teachings will be tolerated in the college. Entire freedom of choice is given the students in selecting the church they will attend. Services are held at the following churches every Sunday: Catholic, Presbyterian, and Methodist; and occasional services are conducted by the Episcopalians. At the Presbyterian church are held meetings of the Young People's Society of Christian Endeavor. With the Methodist church is connected the Epworth League.

#### HOW TO WITHDRAW FROM THE COLLEGE.

If students have occasion to withdraw from the college, they should call on the president and make their arrangements



with him. He will see that their accounts are properly adjusted, that proper records are made of their work, and that any money due from their credit deposit is refunded.

*Students who leave without having satisfactorily adjusted all these matters will not be entitled to an honorable dismissal.*

#### EXAMINATIONS AND STANDING.

Examinations are held at the end of each term. In order to pass, students must make a grade of 70 per cent in each subject. Failing to make this grade, students must report for re-examination on the day specified; failing then, they must take the subject with a subsequent class.

#### ATTENDANCE.

Students are expected to be punctual and regular in attendance. They will not be permitted to leave the college in term time without a leave of absence granted by the President or Faculty. Temporary leave of absence may be granted by the President.

### THE COLLEGE OF AGRICULTURE AND MECHANIC ARTS AS A TEACHERS' TRAINING SCHOOL.

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The New Mexico College of Agriculture and Mechanic Arts does not desire to interfere in any way with those institutions of the Territory giving special attention to Normal work; but in-as-much as the Legislature has provided that the diplomas issued by this College to its graduates, shall be accepted as first-grade teacher's certificates in any of the counties of the Territory, this College offers unusual facilities for properly training students for the responsibilities of the teachers' profession.

#### MATERIAL EQUIPMENT.

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##### THE MAIN BUILDING.

The main building is a fine brick structure of two stories and basement. It is trimmed with stone and has a very heavy

stone foundation. It is well built, nicely finished, and cost about \$25,000. It contains thirteen rooms, all of which are furnished and in constant use. The building is well supplied with gas and water. On the first floor are the library and president's office, as well as a number of recitation rooms. On the second floor, besides several class rooms, is McFie Hall, which is used for class exercises, lectures, and similar purposes, and will seat a large audience.

The library and reading room is large and conveniently furnished. The library contains about 3,300 bound volumes, and a very large number of pamphlets. These works include good dictionaries, encyclopædias, etc., and a considerable amount of general literature of the best class, in addition to the numerous scientific works used by the special departments.

The following periodicals are either on the desks of the reading room, or in the offices of the special departments, and are accessible to students:—

Agricultural Science, American Agriculturist, American Journal of Mathematics, American Chemical Journal, American Machinist, American Naturalist, Analyst, Arena, Astrophysical Journal, Botanical Gazette, Bulletin Torrey Botanical Club, Business (Accountant's Ed.), Canadian Entomologist, Century, Chemical News, Cosmopolitan, Current History, Educational Review, Engineering News, Engineering Magazine, Entomological News, Entomologist, Entomologists' Monthly Magazine, Erythea, Field and Farm (Denver), Forum, Gardening, Harper's Monthly Magazine, Harper's Weekly, Harper's Round Table, Irrigation Age, Journal American Chemical Society, Journal London Chemical Society, Journal Association Engineering Societies, Journal of Education, Journal of the Institute of Jamaica, Journal of Malacology, Journal New York Entomological Society, Journal of the Telegraph, Ladies' Home Journal (two copies), Nautilus, Natural Science, North American Review, Pacific Rural Press, Phonographic World, Popular Science Monthly, Popular Astronomy, Political Science Quar-



terly, Psyche, Review of Reviews, Rural New Yorker, Scientific American, Scientific American Supplement, Science, Science Gossip, Scribner's Magazine, Stenographer, Transactions American Entomological Society, Werner's Voice Magazine, Youth's Companion (two copies).

The following newspapers are furnished gratuitously by the publishers:—

The New Mexico Collegian (College Paper).

The Las Cruces Independent Democrat.

The Las Cruces Rio Grande Republican.

The Dona Ana County Republican.

The Socorro Chieftain.

The Eddy Current.

The Roswell Register.

The Roswell Record.

The Farmington Times.

The New York Weekly Tribune.

The Baltimore Weekly Sun.

Students have access also to the numerous agricultural and horticultural papers which are kindly furnished by the publishers to the Experiment Station Library in exchange for the Station Bulletins.

#### SCIENCE HALL.

This is a large two-story brick building, situated to the north of the Main Building, only recently completed. It contains eleven large rooms, and five smaller ones, besides large hall ways. The lower floor is used by the chemical department, while the upper is occupied by the biological departments; namely, those of botany, entomology, and biogeography. The rooms are fitted up with new furniture specially adapted for their several purposes, and contain a large quantity of valuable apparatus belonging to the different departments. In this building the classes in biology, chemistry, and assaying, are



SCIENCE HALL



A CORNER OF THE LIBRARY

taught. The station work in chemistry and biology is also done here.

#### ENGINEERING BUILDINGS.

These buildings, two in number, are located south of the Main Building. They comprise, besides two large recitation rooms and hall, commodious rooms for wood work, machine work, foundry, blacksmithing, and a 40 horse power steam plant. These buildings are well equipped for Engineering work. Physics and Geology will also be taught in one of the Engineering buildings.

#### GIRLS' DORMITORY.

This is another new brick building, situated on the College Farm. It contains on the first floor a large dining hall, a reception room, kitchen, etc., and upstairs are eleven well lighted and ventilated sleeping rooms, all nicely furnished. About thirty can be accommodated in this building. Miss Ida Freeman is the matron in charge of the dormitory.

#### OTHER BUILDINGS.

Back of the Main Building are the feed rooms and horse sheds. These are for the horses of the students and professors. The charge for their use is 25 cents a term, which is sufficient to keep them cleaned and in order.

Below the Main Building is a pump house with engine and all other necessary machinery for pumping water from a system of six driven wells for the irrigation of the campus, which is much higher than the ditches which irrigate the farm land. This plant cost about \$2,500.

An adobe Farm Building erected at a cost of about \$2,000 is located near the center of the farm. It consists of a residence for the assistant in agriculture and horticulture, and a large room for storing seeds, supplies, etc. The Greenhouse and the sheds for the storing of farm implements and machinery, are located near the farm building.



## COLLEGE STUDENTS.

### GRADUATE.

Bennett, Joseph Francis, Jr., B. S.,.....Mesilla.

### SENIORS.

Casey, Edwin Eugene, .....Las Cruces.  
Cravens, Du Val Garland, .....Ft. Smith, Ark.  
Mead, Charles Edward,.....Mesilla Park.  
Mead, Ivah Rebekah,.....Mesilla Park.  
Stanley, Isaac Henry,.....Pinos Altos.  
Sutherland, William Alexander,.....San Marcial.  
Sweet, Lottie.....Mesilla Park.  
Williams, George Morgan,.....Las Cruces.

### JUNIORS.

Broyles, Richard Franklin.....Las Cruces.  
Coe, Edward James, \* .....Fort Stanton.  
Holt, Walter Edwin,.....Las Cruces.  
Meeker, William Cory, \* .....Las Cruces.  
Peacock, Frederica, \* .....Victoria.

### SOPHOMORES.

Coleman, Elizabeth, \* .....Mesilla Park.  
Davis, Vivette, \* .....El Paso, Tex.  
French, Fannie, \* .....Las Cruces.  
Newberry, Minnie, \* .....Las Cruces.  
Post, Charles L.,.....Mesilla Park.  
Race, Edgar Albert, \* .....El Paso, Tex.  
Thompson, Cayetano, \* .....Georgetown.  
Wickham, Mary C., \* .....Socorro.

### FRESHMEN.

Bailey, Blanche, \* .....Anthony.  
Barber, Charles Melvin, \* .....La Porte, Ind.

\* Conditioned.

Bryan, Joseph, *	Las Cruces.
Casad, Charles Darwin, *	Mesilla.
Goodin, Monte H., *	Las Cruces.
Hubbard, Harry Jenkins, *	Clint, Texas.
Jerrell, Henry, *	Las Cruces.
Knouse, Hattie Mabel, *	Tularosa.
Loomis, Ralph, *	El Paso, Texas.
Macgregor, Marie Justina, *	Mesilla Park.
Macgregor, James Stanislaus, *	Mesilla Park.
May, Ormeda, *	Las Cruces.
McFie, Maud Eliza, *	Las Cruces.
Mott, Rowena, *	Las Cruces.
Newberry, Nora, *	Las Cruces.
Sanchez, Alfredo, *	Mesilla.
Steel, Matthew.	Las Cruces.
Stephens, Bert, *	Pomeroy, Washington.
Wallace, Lunah Ward,	La Luz.

SPECIAL STUDENTS.

Baird, William Wallace.	Las Cruces.
Burt, Edwin.	Mesilla Park.
Hawkins, Morton S.	Portland, Indiana.
Holt, Valeria.	Las Cruces.
Knight, Annie Laurie.	Stirling City, Texas.
Laird, Samuel H.	Los Cerrillos.
Peacock, Viola.	Victoria.
Peake, Lottie M.	Las Cruces.
Roberts, Hubert.	El Paso, Texas.
Sweet, Alma.	Mesilla Park.
Wickham, Anna.	Socorro.
Winter, Edward Ernest.	El Paso, Texas.

SUB-FRESHMEN.

Ames, Henry P.	Las Cruces.
Barnes, Inez.	Silver City.

\*Conditioned.



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Bias, Robert Orville,.....	El Paso, Texas.
Bogardus, Ellen Gertrude,.....	Las Cruces.
Bouquor, Joseph Oscar,.....	El Paso, Texas.
Bowman, Edith Mary,.....	Las Cruces.
Carrera, Regina,.....	Las Cruces.
Casey, Garfield,..	Las Cruces.
Coleman, Ruth,.....	Mesilla Park.
Copeland, Rube Angele,.....	Bonita.
Danburg, Walter Malcolm,.....	Las Cruces.
Dillard, George L.,.....	Nogal.
Ford, Fannie.....	Las Cruces.
Foster, Flossie,.....	Las Cruces.
Fraide, Berardo,.....	Las Cruces.
Freeman, Annie May,,.....	Anthony.
Hegan, Maggie,.....	Organ.
Helm, B. Zell,.....	El Paso, Texas.
Hill, James J.,.....	La Luz.
Hunt, Chester Robert,.....	El Paso, Texas.
Isaacks, Mary Caledonia,.....	Las Cruces.
Kezer, Avery M.,.....	Las Cruces.
Knight, Gladys,.....	Sterling City, Texas.
Krieger, Nils,.....	Springer.
Llewellyn, Frances Louisa,.....	Las Cruces.
Lowe, Lawson,.....	Las Cruces.
Lucas, Harry H.,.....	Weed.
Luchini, Benjamin,.....	Hatch.
Mathies, L. M.,.....	Nogal.
Maxwell, Frank,.....	Tularosa.
Mead, Victor Veil,.....	Mesilla Park.
Metcalf, Mary T.....	Silver City.
Metcalf, Robert James,.....	Silver City.
Mills, Robert Edward,.....	Puerto de Luna.
Mossman, Walter C.....	Mesilla.
Nabours, Benjamin T.....	White Oaks.
Parker, Forest,.....	Albuquerque.

Pelphrey, Willie,.....	El Paso, Texas.
Phillips, Walter S., † .....	Ruidoso.
Phillips, Roy, † .....	Ruidoso.
Poe, Oscar L.,.....	Chamberino.
Portillo, Pedro E.,.....	Chihuahua, Mexico.
Potts, Rex, .....	Las Cruces.
Reush, Guy F.,.....	Earlham.
Robertson, Thomas Oliver,.....	Weed.
Rouault, Theodore, Jr.,.....	Las Cruces.
Scoggins, Ona,.....	Las Cruces.
Snow, Carl,.....	Victoria.
Stewart, Orson W.....	Las Cruces.
Talle, Otie,.....	Springer.
Trujillo, Vilialdo G.,.....	Fairview.

### PREPARATORY STUDENTS.

#### SECOND YEAR.

Barnes, Chauncey Burt.....	Silver City.
Bowman, Ethel.....	Las Cruces.
Breece, Clara Olivia,.....	Mesilla Park.
Buck, William D.....	Las Cruces.
Bull, Charles H.,.....	Mesilla.
Casey, Clara Lillice.....	Las Cruces.
Chase, Mae Bell,.....	Las Cruces.
Chavez, Manuel R.....	Mesilla.
Coe, Bertha Mae.....	Fort Stanton.
Ford, Annis.....	Las Cruces.
Gamboa, George.....	Mesilla.
Garrett, Dudley Poe.....	Las Cruces.
Goodin, Burr.....	Las Cruces.
Helm, Hugh Max.....	El Paso, Texas.
Isaacks, William Frederick,.....	Las Cruces.
Kezer, Grace Belle,.....	Las Cruces.
Mead, Herbert H.....	Mesilla Park.

† Deceased.

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Neal, Homer H.,.....	Mesilla Park.
Newberry, Henry Clay,.....	Las Cruces.
Owen, Blanche E.,.....	Mesilla Park.
Potts, Burt,.....	Las Cruces.
Quintero, Jose, .....	Mesilla.
Ramirez, Rafael,.....	Mesilla.
Ririe, Alexander, .....	Parsons.
Rouault, Ernest Joe,.....	Las Cruces.
Scoggins, Beulah,.....	Las Cruces.
Williams, Samuel H.,.....	Mesilla.
Williams, Willie Waugh,.....	Mesilla.

## FIRST YEAR.

Ascarate, Nemecia,.....	Las Cruces.
Baker, Allie Jane,.....	Weed.
Bogardus, Park,.....	Las Cruces.
Bowman, Charles Y.,.....	Las Cruces.
Breece, Lula.....	Mesilla Park.
Buntz, Frank H.,.....	Las Cruces.
Buntz, Charles T.....	Las Cruces.
Carrera, Linda,.....	Las Cruces.
Carrier, Jose.....	Las Cruces.
Copeland, John,.....	Bonita.
Dessauer, Philip Edward,.....	Las Cruces.
Fall, Jack Morgan,.....	Las Cruces.
Foster, Ethel,.....	Las Cruces.
Freeman, John J.,.....	Anthony.
Frietze, George,.....	Mesilla.
Gilliam, Rexie,.....	Chamberino.
Goodin, Frank,.....	White Oaks.
Hammond, Laura Virginia.....	Gap Creek, Tennessee.
Isaacks, Coila,.....	Las Cruces.
Kennedy, John William.....	Las Cruces.
Lapoint, Willie,.....	Las Cruces.
Llewellyn, Ida May,.....	Las Cruces.

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Lohman, Eugene Alexander,.....	Las Cruces.
Lowe, Joseph,.....	Las Cruces.
Lucero, Juan,.....	Las Cruces.
Mead, Anita L.,.....	Mesilla Park.
Mossman, Nellie Gertrude,.....	Mesilla.
Patterson, Jamie Maranda,.....	Las Cruces.
Patton, John Fernando,.....	Las Cruces.
Phillips, Peter,.....	Ruidoso.
Robertson, Spottswood,.....	Mesilla Park.
Sweet, Allen Jacob,.....	Mesilla Park.
White, Joe Russell, .....	Las Cruces.
Winter, Pelham,.....	El Paso, Texas.

SPECIAL STUDENTS.

Aragon. Juan,.....	Paraje.
Ascarate, Ricardo,.....	Las Cruces.
Baker, Nora Elizabeth, .....	Weed.
Barrett, George William,.....	Fort Stanton.
Bermudez, Antonio E., .....	Mesilla.
Bombach, Oswald. ....	Las Cruces.
Brown, G. S.,.....	Bonita.
Carreras, Pedro, .....	Hatch.
Coleman, Dan, .....	Mesilla Park.
Coleman, James,.....	Los Cerrillos.
Copeland. William,.....	Bonita.
Forbes, John,.....	Las Cruces.
George. Lawrence,.....	Cook's Peak.
George, James William,.....	Cook's Peak.
Gonzales, Jesus.....	Mesilla Park.
Lara, Jesus,.....	Las Cruces.
Metcalf, Orick Baylor,.....	Silver City.
Reush, Claude,.....	Earlham.
Rhodes, Lula Ella,.....	Leasburg.
Rowland, George A.,.....	Fort Stanton.
Stuppie, Nic. ....	El Paso, Texas.

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Silva, Alberto,.....	Colorado.
Silva, Higario, .....	Hatch.
Silva, Manuel,.....	Colorado.
Silva, Vicente,.....	Hatch.
Stewart, Frank,.....	Las Cruces.
Stewart, John,.....	Las Cruces.
Telles, Carlos,.....	Las Cruces.

### BUSINESS STUDENTS.

#### STENOGRAPHY AND TYPEWRITING.

Alvarez, Lauro Canuto, *	Anthony.
Andress, David Ellsworth, *	Morenci, Arizona.
Bailey, Rolla C.,.....	Chamberino.
Fennell, Samuel John, *	Turner's Falls, Mass.
Freeman, Hugh.....	Eddy.
French, Floy Edna, .....	Las Cruces.
Gonzales, Pablo,.....	Las Cruces.
Hager, Earl Munroe,.....	Eureka, Kansas.
Herron, Maite Katherine,.....	Las Cruces.
Meeker, William Cory,.....	Las Cruces.
Molinary, Joseph Chester,.....	El Paso, Texas.
Nelson, Adele B., .....	Tipton, Missouri.
Owen, James Edward..	Mesilla Park.

#### BOOKKEEPING.

Baird, A. Eugene,.....	Las Cruces.
Bean, Albert Sidney, .....	Van Horn, Texas.
Bouquor, Joseph Oscar,.....	El Paso, Texas.
Fraide, Berardo,.....	Las Cruces.
Griggs, Gustave Dore,.....	Mesilla.
Johnson, James Cleveland,.....	Van Horn, Texas.
Kezer, Roy Vernon,.....	Las Cruces.
Lllewellyn, Morgan,.....	Las Cruces.
Luchini, Benjamin,.....	Hatch.

\* Left before the close of the year to accept positions.

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Martin, Charles C.,.....	Duncan, Arizona.
Maxwell, Frank,.....	Tularosa.
Newberry, Maud,.....	Las Cruces.
Portillo, Pedro E.,.....	Chihuahua, Mexico.
Stinnett, Russell Tamah,.....	Bells, Virginia.
Wayland, Edwin H.,.....	La Luz.

### SUMMARY.

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Graduate.....	1.
Seniors.....	8.
Juniors.....	5.
Sophomores.....	8.
Freshmen.....	19.
Special students.....	12.
Sub-Freshmen.....	51.
Preparatory.....	89.
Stenography and Typewriting.....	13.
Bookkeeping.....	15.
	<hr/>
	221.
Names repeated.....	6.
	<hr/>
Total number of students.....	215.



# THE AGRICULTURAL EXPERIMENT STATION.

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BOARD OF CONTROL:

## BOARD OF REGENTS OF THE COLLEGE.

---

G. A. RICHARDSON, Roswell, President.

P. H. CURRAN, Las Cruces, Secretary and Treasurer.

A. A. JONES, Las Vegas.

H. D. BOWMAN, Mesilla Park.

JACINTO ARMIJO, Las Cruces.

MIGUEL A. OTERO, Governor, Santa Fe, *Ex-Officio*.

MANUEL C. DE BACA, Superintendent of Public Instruction,  
Santa Fe, *Ex-Officio*.

## STATION STAFF, 1897-'98.

---

CORNELIUS T. JORDAN, A. M., Director.

ARTHUR GOSS, M. S., A. C., Chemist and Vice Director.

T. D. A. COCKERELL, Entomologist.

GEORGE VESTAL, Agriculturist and Horticulturist.

E. O. WOOTON, A. M., Botanist.

C. H. T. TOWNSEND, Biogeographer and Systematic Entomologist.

JOHN D. TINSLEY, Biologist.

R. FRED HARE, M. S., Assistant Chemist.

FABIAN GARCIA, B. S., Assistant Agriculturist and Horticulturist.

ALFRED M. HOLT, M. S., Second Assistant Chemist.

HUMBOLDT CASAD, Assistant Agriculturist and Horticulturist.

FRANK E. LESTER, Clerk.

ELIZABETH WICKHAM, Assistant Clerk.

CHARLES E. MEAD, B. S., Superintendent of San Juan Branch Experiment Station, Aztec.

JOHN S. THORNHILL, Superintendent of Las Vegas Branch Experiment Station, Las Vegas.

## COLLEGE EXPERIMENT STATION.

By the Congressional Act of 1887, the Hatch Act, (see page 10,) a "Department" of Agricultural Colleges was endowed, having for its purpose the performing of experiments of value to Agriculture and Horticulture and the diffusing of valuable information among the people. The Territorial Act of February 28, 1889, which established the New Mexico College of Agriculture and Mechanic Arts, established also an Experiment Station in connection with the college. This department is in successful operation,

The College Farm, which was donated to the Territory by the citizens of Dona Ana County, contains about 250 acres. Nearly 100 acres of this farm is good river bottom land, supplied with water from the Las Cruces Community ditch, which crosses it. This tract is divided into eight plats, which are subdivided into plats of various sizes, from a square rod to an acre.

Plats I. and VIII. are in the old river bed, and are used at present for growing alfalfa for the farm stock.

Plat II. is used mainly for experiments in wheat, rye, and barley, and one-fourth of an acre is planted in a new variety of alfalfa from Turkey.

Plat III. contains the orchard and vineyard. The orchard contains 150 varieties of peaches, 90 of apples, 60 of pears, 50 of plums and prunes, 16 of cherries, 20 of apricots, 4 of nectarines, 5 of quinces, 6 of figs, etc. There are four trees of each variety, most of which are of bearing age. The vineyard contains 100 varieties of American and foreign grapes.

Plat IV. contains about one acre of canaigre for experimental purposes, the balance not being cultivated on account of the floods from the foothills. The pump for pumping water for the trees on the campus is located on this plat.

Plat V. contains ten acres, and is used by the students for athletic grounds.

Plat VI. contains six experimental plats of corn, thirteen

one-acre plats of alfalfa for experimental purposes, a horse and hog pasture, etc. The farm building, greenhouse and Girls' Dormitory are located on this plat.

Plat VII. is devoted to experiments in garden pease, corn, tomatoes, sweet potatoes, grasses, vetches, wheats, fodder plants, sugar beets and several acres of alfalfa for feeding purposes.

The remaining 150 acres is mesa land. Thirty acres were cleared for experimentation and for the location of the College Buildings. A part of this tract is irrigated with water raised from wells by steam power.

A great number of valuable horticultural and agricultural experiments are in progress, and more are being constantly begun. During a large part of the year, students have opportunities to labor on this farm, thus enabling them to defray a considerable portion of their expenses. Besides this, they are under the direct guidance and instruction of an experienced horticulturist and agriculturist. This alone is a valuable consideration.

A meteorological station is maintained on the College Farm, where a record of the daily observations of the weather is kept. The following standard instruments are in use: wind vane, rain gauge, self-registering anemometer, mercurial barometer, dry and wet bulb thermometers, maximum and minimum thermometers, soil thermometers, etc.

In the Chemical department much work has been done on irrigating waters, native forage plants, food of the native population, alkali, and various other subjects of special interest to the farmers of the Territory. Besides being of the highest importance to the agricultural classes, this work affords the students an opportunity of seeing chemical processes practically applied.

In the Botanical department the native flora is studied, with special reference to plants suitable for fodder, and to injurious weeds, parasitic fungi, etc. The department of Biology concerns itself with problems of plant-physiology and kindred

matters of considerable economic importance. The entomologist studies the insects of New Mexico, especially those which have proved injurious. The scale-insects of the world are also studied in the entomological department. The department of Biogeography and Systematic Entomology is engaged in the study of life-zones and the determination of insects.

The following Bulletins have been issued from the Experiment Station, and are sent free of charge to all persons in New Mexico who apply for them:—

No. 1, April, 1890—General Information.

No. 2, October, 1890—Outline of Plans of Experimentation.

No. 3, June, 1891—Preliminary Account of Some Insects Injurious to Fruit.—C. H. Tyler Townsend.

No. 4, March, 1892—Fruit Trees, Forest and Shade Trees, Nut-bearing Trees, and Vegetables.—A. E. Blount.

No. 5, March, 1892—Notices of Importance concerning Fruit Insects.—C. H. Tyler Townsend.

No. 6, March, 1892—Cereals, Forage Plants, Grasses, Clovers, Textile Plants, and Sorghums.—A. E. Blount.

No. 7, June, 1892—Scale-insects in New Mexico.—C. H. Tyler Townsend.

No. 8, November, 1892—Wheat, Oats, Barley, Rye, Sugar Beets, Sorghum, Canaigre, etc.—A. E. Blount.

No. 9, May, 1893—Insecticides and their Appliances.—C. H. Tyler Townsend.

No. 10, September, 1893—Insects of 1893.—T. D. A. Cockrell.

No. 11, October, 1893—Notes on Canaigre and Meteorological Data.—A. E. Blount and Harvey H. Griffin.

No. 12, November, 1893—The Value of Rio Grande Water for the Purpose of Irrigation.—Arthur Goss.

No. 13, New Mexico Weeds, No. 1.—E. O. Wooton.

No. 14, Canaigre.—A. E. Blount.

No. 15, Entomological Observations in 1894: Life Zones in

New Mexico; Entomological Diary at Santa Fe.—T. D. A. Cockerell.

No. 16 September, 1895—The Russian Thistle.—E. O. Wooton.

No. 17, December, 1895—Principles of Stock Feeding and Some New Mexico Feeding Stuffs.—Arthur Goss.

No. 18, March, 1896—Some New Mexico Forage Plants.—E. O. Wooton.

No. 19, April, 1896—Report of the Entomologist, (Part 1.) T. D. A. Cockerell.

No. 20, December, 1896—Seeds.—George Vestal.

No. 21, January, 1897—Results of Experiments at San Juan Sub-Station.—H. H. Griffin.

No. 22, March, 1897—Alkali in the Rio Grande and Animas valleys.—Arthur Goss and H. H. Griffin.

No. 23, April, 1897—Sugar Beets.—Cornelius T. Jordan.

No. 24, August, 1897—Life-Zones in New Mexico.—T. D. A. Cockerell.

No. 25, February, 1898—Preliminary Notes on the Codling Moth.—T. D. A. Cockerell.

#### BRANCH EXPERIMENT STATIONS.

In February, 1893, the Thirtieth Legislative Assembly passed Acts creating Branch Experiment Stations.

The *first* is located near Aztec on a tract of 120 acres of irrigated land, donated to the Territory by the citizens of San Juan county.

The *second* is located near Las Vegas on a tract of 160 acres of land, which may be irrigated, and which was donated to the Territory by the citizens of San Miguel county.

The *third* will be located near Roswell on a tract of 100 acres of irrigated land, which has recently been donated to the Territory by the citizens of Chaves county.

In each of the several acts creating these Branch Experiment Stations is a section authorizing the Regents to apply to



the support and maintenance of each station such a part of the funds received from the United States for Agricultural Experiment Stations as can be so applied *in justice to each of the other stations, and to the Agricultural College*. There is no doubt that more Branch Stations have already been created by the Legislative Assembly than can be provided for out of the Station fund of the College. It should be understood that the Branch Stations already established can never be very beneficial to the sections in which they are located, unless the Territory is willing to assume the burden of their support. The analytical work in chemistry, botany, and entomology will always be done at the College Experiment Station and the results published here. If any further demands are made on the Experiment Station fund the character of the work done here will necessarily deteriorate. The Agricultural Colleges in the old states, without exception, have abolished all their Branch Experiment Stations, because of the great expense and small returns.







A. M. Sanchez

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THE LIBRARY  
OF THE  
UNIVERSITY OF ILLINOIS

Ninth  
Annual  
Catalogue

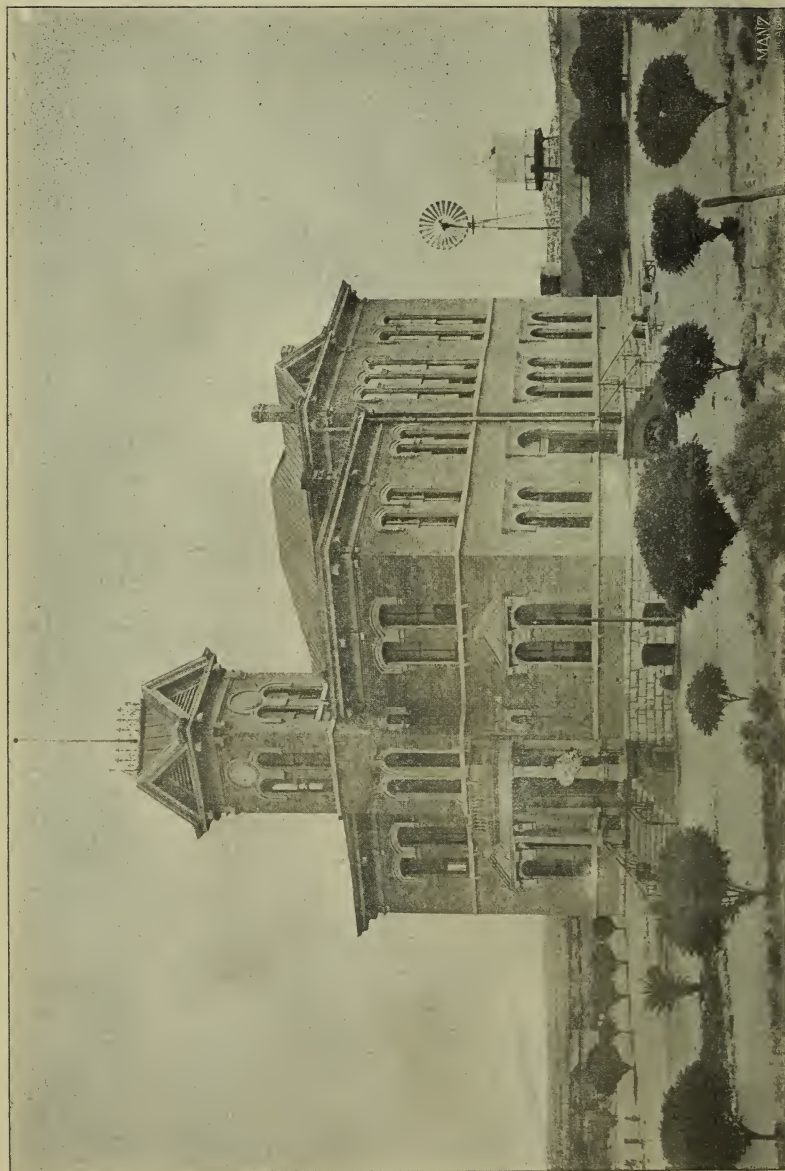
NEW MEXICO  
COLLEGE OF AGRICULTURE  
—AND—  
MECHANIC ARTS,  
MESILLA PARK.

1898-'99  
AND  
Announcements for 1899-1900.









THE MAIN BUILDING

NEW MEXICO

COLLEGE OF AGRICULTURE

—AND—

MECHANIC ARTS,

MESILLA PARK.

Catalogue for 1898='99,

—AND—

Announcements for 1899=1900.

Printers:  
DONA ANA COUNTY REPUBLICAN,  
Las Cruces, N. M.  
1899.

## Calendar for 1899=1900.

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Examinations of candidates for admission, September 4 and 5, 1899, and May 24, 25, and 29, 1900.

Re-examinations, September 4 and 5, 1899.

First term begins Wednesday, September 6, 1899.

First term ends Wednesday, November 29, 1899.

Second term begins Monday, December 4, 1899.

Christmas vacation begins Saturday, December 23, 1899, and ends Sunday, January 7, 1900.

Second term ends Wednesday, March 7, 1900.

Third term begins Monday, March 12, 1900.

Third term ends Wednesday, May 30, 1900.

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## BOARD OF REGENTS.

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MIGUEL A. OTERO, Governor, *Ex Officio*.

MANUEL C. DE BACA, Supt. Public Instruction, *Ex Officio*.

HENRY D. BOWMAN, Mesilla Park, term expires 1899.

G. A. RICHARDSON, Roswell, term expires 1900.

A. A. JONES, Las Vegas, term expires 1901.

PHILIP H. CURRAN, Las Cruces, term expires 1902.

JACINTO ARMIJO, Las Cruces, term expires 1903.

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### Officers of the Board.

H. D. BOWMAN, President.

PHILIP H. CURRAN, Secretary and Treasurer.

## FACULTY.

[Arranged in the order of appointment, except the President.]

FREDERIC W. SANDERS, Ph. D.,  
*President and Professor of Political and Economic Science.*

CLARENCE T. HAGERTY, M. S.,  
*Professor of Mathematics and Astronomy.*

ARTHUR GOSS, M. S., A. C.,  
*Professor of Chemistry.*

FRANK W. BRADY, M. E.,  
*Professor of Mechanical and Civil Engineering.*

IDA M. JONES,  
*Professor of Spanish.*

T. D. A. COCKERELL,  
*Professor of Entomology.*

HIRAM HADLEY, A. M.,  
*Professor of History and Pedagogy.*

E. O. WOOTON, A. M.,  
*Professor of Botany, and in charge of Geology and Physics.*

F. F. BARKER, LL. B.,  
*Professor of English and Latin.*

R. R. LARKIN, B. S.,  
*Principal of the Preparatory Department.*

J. D. TINSLEY, B. S.,  
*Professor of Zoology.*

CHARLES A. KEFFER,  
*Professor of Agriculture and Horticulture.*

---

FRANK E. LESTER, *ex off.*,  
*Secretary to the Faculty; College Clerk and Librarian; In-*  
*structor in Stenography and Typewriting.*



## INSTRUCTORS AND ASSISTANTS.

---

R. FRED HARE, M. S.,  
*Instructor in Chemistry.*

CHARLES MILLS,  
*Instructor in College Shops.*

ELLEN F. GIBSON,  
*Instructor in Elocution and Physical Culture, and Assistant  
in the Preparatory Department.*

MRS. LAURA FRENGER,  
*Instructor in Music.*

[ TO BE FILLED. ]

*Instructor in Domestic Economy and Matron of Girls' Dormitory.*

FABIAN GARCIA, B. S.,  
*Assistant in Agriculture.*

JOSEPH F. BENNETT, JR., M. S.,  
*Assistant in Botany, Geology and Physics.*

HUMBOLDT CASAD,  
*Assistant in Horticulture.*

KATHERINE DOUGHTY,  
*Assistant in the Preparatory Department.*

GERALDINE COMBS,  
*Assistant in the Preparatory Department.*

HELEN M. MACGREGOR,  
*Assistant College Clerk.*

ELIZABETH WICKHAM,  
*Assistant Librarian.*

## FACULTY COMMITTEES FOR 1899-'00.

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### COURSES OF STUDY.

Clarence T. Hagerty, *Chairman*.

R. R. Larkin.....E. O. Wooton.

### CATALOGUE.

T. D. A. Cockerell, *Chairman*.

F. F. Barker.....R. R. Larkin.

### JUDICIARY.

Arthur Goss, *Chairman*.

Clarence T. Hagerty.....T. D. A. Cockerell.

### BUILDINGS AND GROUNDS.

Charles A. Keffer, *Chairman*.

Hiram Hadley..... Frank W. Brady.

### LEGISLATION FOR COLLEGE.

Frank W. Brady, *Chairman*.

Charles A. Keffer.....Hiram Hadley.

### ENTERTAINMENT.

R. R. Larkin, *Chairman*.

E. O. Wooton .....Ida M. Jones.

### BOARDING.

Hiram Hadley, *Chairman*.

J. D. Tinsley.....Arthur Goss.

### DISCIPLINE.

E. O. Wooton, *Chairman*.

Frank W. Brady.....Ida M. Jones.

### LIBRARY.

F. F. Barker, *Chairman*.

J. D. Tinsley ..... Arthur Goss.

Frank E. Lester. *ex off*.

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NOTE—The President of the Faculty is *ex officio* a member of  
all Committees.

## GENERAL STATEMENT.

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### LOCATION.

The New Mexico College of Agriculture and Mechanic Arts is situated at Mesilla Park, Doña Ana County. Its location in the Mesilla Valley, gives it the best advantages for agricultural and horticultural experiments; and is a good one from a sanitary point of view. The College farm is crossed near the center by a fine driveway from Mesilla Park station to the College buildings. Visitors are always welcome. Mesilla Park is on the main line of the Atchison, Topeka & Santa Fe Railroad, and is easily accessible from different parts of the Territory. Las Cruces, a town about two and one half miles distant, has a population of about 3,000 inhabitants. It has a public school, two mission schools, and a Catholic academy for the education of girls. The Presbyterians, Methodists, and Catholics have church organizations, and students are always welcomed to their services. The valley is noted for being the largest fruit and alfalfa shipping point in the Territory, and is rapidly becoming known as one of the finest winter health resorts in the United States.

### ORIGIN.

The New Mexico College of Agriculture and Mechanic Arts, under a slightly different name, was established by the Twenty-eighth Assembly of New Mexico by act approved February 28, 1889. The purpose of the institution is defined in Section 19 of this act:—

“The Agricultural College created and established by this act shall be non-sectarian in character, and devoted to practical

instruction in agriculture, mechanic arts, natural sciences connected therewith, as well as a thorough course of instruction in all branches of learning bearing upon agriculture and other industrial pursuits."

The branches in which instruction may be given are set forth as follows in Section 20 of the same act:—

"The course of instruction of the College hereby created shall embrace the English language, literature, mathematics, philosophy, civil engineering, chemistry, animal and vegetable anatomy and physiology, the veterinary art, entomology, geology, and political, rural, and household economy, horticulture, moral philosophy, history, mechanics, and such other sciences and courses of instruction as shall be prescribed by the regents of this institution of learning."

By Section 25 of the same act, the assent of the Legislative Assembly was given to the establishment of Experiment Stations within the Territory of New Mexico in connection with the Agricultural College in pursuance to the act of Congress approved March 2, 1887,—the Hatch Act.

#### INCOME.

The revenues of this College are derived from the following sources:—

1. Students' fees.
2. Sale of College farm products.
3. Territorial tax and special appropriations.
4. The United States, under Congressional Act of March 2, 1887—the Hatch fund.
5. The United States, under Congressional Act of August 30, 1890—the Morrill fund.

The money received from students and from the sale of products from the College farm has, so far, been very limited, and has been used principally for paying expenses not provided for by either act of Congress.

The Territorial Act creating the institution provided for an annual levy of one-fifth of a mill, commencing with the year

1889. This levy now yields an annual income of about \$6,000.

By the United States law of March 2, 1887, the *Hatch Act*, appropriations are made for the maintenance of Experiment Stations in connection with Agricultural Colleges in the several States and Territories. For the support of each station there is set apart the sum of \$15,000 a year, payable quarterly. This money must be used for "paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results." Bulletins showing progress must be printed each quarter, and sent to each newspaper in the Territory and to all farmers who apply for them. This fund first became available for this College in 1889-90, to the amount of \$10,000. Since July 1, 1890, \$15,000 a year has been received. *After the first year, only five per cent of this fund may be used to erect, enlarge or repair buildings for the use of the Experiment Station.*

The Morrill Fund was created by the United States law of August 30, 1890, "for the more complete endowment and support of the Colleges of Agriculture and Mechanic Arts in the several States and Territories." It is paid over to them before July 31. of each year. The College received this fund first in 1890, to the amount of \$15,000. For the coming fiscal year this fund will be \$25,000, at which sum it will remain. This fund can be applied only "to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic sciences, with special reference to their application in the industries of life, and to the facilities for such instruction." *No part of this fund may be used for building purposes.*

#### ENDOWMENT.

A bill has recently been passed by Congress granting this College 100,000 acres of public land, the proceeds of which are to form a permanent endowment fund. If this land be carefully located, it can be made to yield the College in time a fair endowment.

## REQUIREMENTS FOR ADMISSION.

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Unless admitted on a Certificate from the Preparatory Department, or on a Certificate showing that an equivalent amount of work has been done elsewhere, candidates for admission to the Sub-Freshman year must pass examinations in the subjects covered by the following text-books, or their equivalents:—

*Geography.*—Maury's Manual of Geography and Maury's Physical Geography.

*United States History.*—Barnes's Brief History of the United States.

*Civil Government.*—McCleary's Studies in Civics.

*English.*—Reed and Kellogg's Higher Lessons in English.

*Physiology.*—Martin's Human Body (Briefer Course).

*Arithmetic.*—White's Complete Arithmetic.

*Algebra.*—Milne's High School Algebra to involution.

*Free-hand Drawing.*—The equivalent of ninth grade work of the public schools.

Candidates for admission to the Freshman year will be admitted without examination upon completion of the subjects of the Sub-Freshman year or on a Certificate showing that the same or an equivalent amount of work has been completed at any of the following High Schools:

Raton High School.

Las Vegas High School.

Albuquerque High School.

Deming High School.

Roswell High School.

El Paso High School.

Other candidates must pass examinations in the following



subjects in addition to those required for admission to the Sub-Freshman year:—

*English.*—Lockwood's Lessons in English, or its equivalent. No applicant will be admitted who is unable to write English fairly correct in spelling, punctuation, paragraphing, and so forth, and free from gross grammatical and rhetorical errors. Some knowledge of literature is also required.

*General History.*—Fisher's Brief History of the Nations, or its equivalent.

*Algebra.*—Milne's High School Algebra through logarithms, or its equivalent.

*Physics.*—Shaw's Physics by Experiment, or its equivalent.

*Botany.*—Spalding's Introduction to Botany, or its equivalent.

Students coming from other colleges whose requirements for admission are substantially equivalent to those of this college may be admitted to corresponding classes here, provided they bring certificates showing amount of work completed. Other candidates for advanced standing will be examined in the subjects prescribed for admission, and also in the undergraduate studies which they desire to be credited with.

On entering the Sub-Freshman class students should be at least fifteen years of age, and on entering the Freshman class they should be at least sixteen years of age.

All applicants for admission must furnish satisfactory evidence of good moral character.

## COURSES OF STUDY.

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The following Collegiate Courses of Study are open to students:—

- I. Agricultural Course.
- II. Mechanical Engineering Course.
- III. Civil Engineering Course.
- IV. Scientific Course.

With very few exceptions, these courses are alike in the Freshman and Sophomore years. For these years the branches of study have been selected for their value in attaining mental culture, and in furnishing the necessary information for the strictly technical studies of the Junior and Senior years. An attempt is made to carefully supplement theory with practice in all courses.

Students of mature years, who can not remain long enough to take a full course, may be allowed to take special courses. The Faculty reserves the right to refuse such requests, or to order such modifications as may seem best for the student and college. No degrees are granted for special work, but those who perform such work in a satisfactory manner will receive certificates.

### DEGREES.

The degree of *Bachelor of Science* (*B. S.*) is conferred on students who satisfactorily complete the work prescribed in any of the Collegiate courses of study.

The degree of *Master of Science* (*M. S.*) is conferred on students, who, after taking at this College the degree of *B. S.*, pursue for at least one year here, or two years elsewhere, a course of study, approved by the Faculty, in at least two departments, pass an examination on the same, and present a satisfactory thesis.

COURSES OF STUDY.—*Sub-Freshman Year.*

FIRST TERM.	SECOND TERM.	THIRD TERM.
Algebra ..... 5	Algebra ..... 5	Algebra ..... 5
Literary Reading and Composition ..... 5	Literary Reading and Composition ..... 5	Literary Reading and Composition. ... 5
General History ..... 4	General History ..... 4	General History ..... 4
Physics ..... 3	Physics ..... 3	Botany ..... 3
Elementary Agriculture ..... 2	Agriculture ( $\frac{1}{2}$ term) and Hort. ( $\frac{1}{2}$ term) 2	Horticulture ..... 2
Free-hand Drawing ..... 4	Botany ..... 4	Free-hand Drawing ..... 4
*Carpentry ..... 2	* Carpentry ..... 2	* Carpentry ..... 2

\* Women take Domestic Economy (2) instead of Carpentry.

NOTE.—The figures denote the number of hours per week.

## COURSES OF STUDY.—Freshman Year.

AGRICULTURAL.	MECHANICAL ENG.	CIVIL ENGINEERING.	SCIENTIFIC.
Geometry.....5 Spanish or Latin.....5 English.....5 Mechanical Drawing.....4 Bench Work in Wood.....6 Wood Working Tools and Elements of Construction.....1	Geometry.....5 Spanish or Latin.....5 English.....5 Mechanical Drawing.....4 Bench Work in Wood.....6 Wood Working Tools and Elements of Construction.....1	Geometry.....5 Spanish or Latin.....5 English.....5 Mechanical Drawing.....4 Bench Work in Wood.....6 Wood Working Tools and Elements of Construction.....1	Geometry.....5 Spanish or Latin.....5 English.....5 * Mechanical Drawing.....4 * Bench Work in Wood.....6 * Wood Working Tools and Elements of Construction.....1
Geometry.....5 Spanish or Latin.....5 English.....5 Elementary Chemistry.....4 Horticulture—Fruit Growing 5	Geometry.....5 Spanish or Latin.....5 English.....5 Elementary Chemistry.....4 Wood Turning.....6	Geometry.....5 Spanish or Latin.....5 English.....5 Elementary Chemistry.....4 Wood Turning.....6	Geometry.....5 Spanish or Latin.....5 English.....5 Elementary Chemistry.....4 Horticulture—Fruit Growing..5
Geometry (4) and Algebra (1) 5 Spanish or Latin.....5 English.....5 Agriculture—Soils and Crops 4 Iron and Steel Forging.....6	Geometry (4) and Algebra (1)..5 Spanish or Latin.....5 English.....5 Mechanical Drawing.....4 Iron and Steel Forging.....6	Geometry (4) and Algebra (1)..5 Spanish or Latin.....5 English.....5 Mechanical Drawing.....4 Iron and Steel Forging.....6	Geometry (4) and Algebra (1)..5 Spanish or Latin.....5 English.....5 * Mechanical Drawing.....4 * Iron and Steel Forging.....6

\* Women take Floriculture (5) and Domestic Economy (5) instead of Mechanical Drawing and the Shop Practice.  
 NOTE.—The figures denote the number of hours per week.

First Term.

Second Term.

Third Term.

COURSES OF STUDY.—*Sophomore Year.*

AGRICULTURAL.	MECHANICAL ENG.	CIVIL ENGINEERING.	SCIENTIFIC.
Trigonometry.....5	Trigonometry.....5	Trigonometry.....5	Trigonometry.....5
Spanish or Latin.....5	Spanish or Latin.....5	Spanish or Latin.....5	Spanish or Latin.....5
Physics.....5	Physics.....5	Physics.....5	Physics.....5
English.....1	English.....1	English.....1	English.....1
Elocution.....4	Elocution.....4	Elocution.....4	Elocution.....4
Zoology.....4	Pattern Making.....6	Pattern Making.....6	Zoology.....4
Political Science.....5	Descriptive Geometry.....5	Descriptive Geometry.....5	Political Science or Pedagogy.....5
Spanish or Latin.....5	Spanish or Latin.....5	Spanish or Latin.....5	Spanish or Latin.....5
Physics.....4	Physics.....4	Physics.....4	Physics.....4
English.....1	English.....1	English.....1	English.....1
Zoology.....4	Mechanical Drawing.....4	Mechanical Drawing.....4	Zoology.....4
Surveying.....6	Surveying.....6	Surveying.....6	* Surveying.....6
Horticulture (Garden Making).....5	Analytic Geom. and Algebra.....5	Analytic Geom. and Algebra.....5	Analytic Geom. and Algebra, or History of Education.....5
Spanish or Latin.....5	Spanish or Latin.....5	Spanish or Latin.....5	Spanish or Latin.....5
Physics.....5	Physics.....5	Physics.....5	Physics.....5
English.....1	English.....1	English.....1	Physics.....5
Zoology.....3	Mechanical Drawing.....4	Plotting and Mapping.....4	English.....1
Commercial Law.....4	Pattern Making.....6	Surveying.....6	Zoology.....3
			Commercial Law or Pedagogy.....4

*First Term.      Second Term.      Third Term.*

\* Women take Physical Culture (5) instead of Surveying.  
NOTE.—The figures denote the number of hours per week.

*COURSES OF STUDY.—Junior Year.*

AGRICULTURAL.	MECHANICAL ENG.	CIVIL ENGINEERING.	SCIENTIFIC.
English Literature.....4 Chemistry.....5 Agriculture.....5 English.....1 Physiology.....5 Botany.....5	Analytic Geometry.....4 Chemistry.....5 Elementary Mechanics.....5 English.....1 Machine Design.....4 Machine Shop.....6	Analytic Geometry.....4 Chemistry.....5 Elementary Mechanics.....5 English.....1 Topographical Drawing.....4 Topographical Surveying.....6	Span., Eng. Lit., or Anal. Geom.4 Chemistry.....5 Elementary Mechanics, or Elementary Psychology.....5 English.....1 Physiology.....5 Botany.....5
English Literature.....5 Chemistry.....5 Entomology.....4 English.....1 Elocution.....1 Botany.....8	Calculus.....5 Chemistry.....5 Mechanism.....4 English.....1 Elocution.....1 Machine Design.....2 Machine Shop.....6	Calculus.....5 Chemistry.....5 Roads and Pavements.....4 English.....1 Elocution.....1 Railway Surveying.....8	Span., Eng. Lit., or Calculus.5 Chemistry.....5 Entomology or Pedagogy.....4 English.....1 Elocution.....1 Botany.....8
Theory of Horticulture.....5 Botany.....5 Entomology.....4 English.....1 Chemical Laboratory.....10	Calculus.....5 Analytical Mechanics.....5 Strength of Materials.....4 English.....1 Chemical Laboratory.....10	Calculus.....5 Analytical Mechanics.....5 Strength of Materials.....4 English.....1 Chemical Laboratory.....10	Span., Eng. Lit., or Calculus.5 Botany.....5 Entomology, Pedagogy, or Constitutional Law.....4 English.....1 Chemical Laboratory.....10

NOTE.—The figures denote the number of hours per week.

*First Term.*

*Second Term.*

*Third Term.*



## COURSES OF STUDY.—Senior Year.

	AGRICULTURAL.	MECHANICAL ENG.	CIVIL ENGINEERING.	SCIENTIFIC.
<i>First Term.</i>	Mineralogy ..... 5 Astronomy ..... 5 Psychology ..... 4 English ..... 1 Elective..... 9	Mineralogy ..... 5 Hydraulics ..... 5 Steam Boilers ..... 4 English ..... 1 Designing ..... 4 Machine Shop..... 6	Mineralogy..... 5 Hydraulics..... 5 Astronomy..... 5 English..... 1 Stereotomy ..... 4 Irrigation Engineering..... 6	Mineralogy..... 5 Astronomy ..... 5 Psychology ..... 4 English..... 1 Elective..... 9
<i>Second Term.</i>	Geology..... 4 Political Economy ..... 5 Agriculture—Stock Feeding 4 English ..... 1 Astronomy ..... 4 Elective ..... 8	Metallurgy..... 4 Political Economy..... 5 Steam Engine..... 5 English ..... 1 Roofs and Bridges..... 4 Engine and Boiler Tests..... 6	Metallurgy..... 4 Political Economy ..... 5 Astronomy..... 4 English ..... 1 Roofs and Bridges..... 10	Geology..... 4 Political Economy ..... 5 Psychology ..... 4 English..... 1 Astronomy..... 4 Elective..... 8
<i>Third Term.</i>	Geology ..... 5 History of Civilization ..... 5 English ..... 3 Elocution ..... 2 Astronomy ..... 1 Thesis ..... 9	Electrical Engineering..... 5 Engineering Structures ..... 5 English..... 3 Elocution ..... 2 Thesis ..... 10	Electrical Engineering..... 5 Engineering Structures..... 5 English ..... 3 Elocution ..... 2 Astronomy..... 1 Thesis..... 9	Geology ..... 5 History of Civilization or Philosophy of Education... 5 English..... 3 Elocution ..... 2 Astronomy ..... 1 Thesis..... 9

NOTE.—The figures denote the number of hours per week.

## DEPARTMENTS OF INSTRUCTION.

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### AGRICULTURE AND HORTICULTURE.

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CHARLES A. KEFFER, Professor.

FABIAN GARCIA, Assistant in Agriculture.

HUMBOLDT CASAD, Assistant in Horticulture.

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*Sub-Freshman Year.*—The first half of the Sub-Freshman year is devoted to a discussion of the elements of agriculture,—two exercises a week. The last half of the year is occupied with a discussion of the more simple horticultural processes, with practice in seed-planting, transplanting, the making of cuttings, grafts, etc. Two exercises a week.

The instruction throughout the Sub-Freshman year is made as practical as possible, and is largely preparatory for the more thorough work of the subsequent course.

*Freshman Year.—Fall Term.*—An optional course in Floriculture is offered women students. The course consists of lessons in the propagation and management of flowering plants. Practice in seed-sowing and the various methods of propagation is offered, the plant house affording all necessary material and conveniences for the work. The care of house plants and flower gardens will be considered. Five exercises a week.

*Winter Term.*—Horticulture: Fruit Growing. The subject will be taught by lectures with supplementary reading. The extensive orchards on the College Farm and several large commercial orchards in the vicinity afford unusual means of illustration. The work is required of all Agricultural students and of Scientific students. It may be elected by the women in the Scientific course. Five exercises a week.

*Spring Term.* Agriculture.—Soils and Crops.—Morrow and Hunt's "Soils and Crops of the Farm" with King's "The

Soil" and Robert's "The Fertility of the Land" form the basis for the term's work. An especial effort will be made to apply the principles discussed to New Mexico agriculture. The College Farm affords excellent means of illustrating the work. Four exercises a week.

*Sophomore Year.—Winter Term.*—By special arrangement with Professor Hagerty the Agricultural Students will be given practice, during their course in surveying, in the measurement of fields, running levels, laying out ditch-lines, and other surveying work of direct practical application on the farm.

*Spring Term.*—Horticulture.—Garden Making. Bailey's text-book will be used as a basis for instruction in vegetable, small fruit, and ornamental gardening. The extensive gardens of the department afford ample opportunity for illustration and practice. Five exercises a week.

*Junior Year.—Fall Term.*—Agricultural Engineering and Farm Management.—In a country where all farming is done by the aid of irrigation a course in agricultural engineering is of great importance. The planning of ditch-systems, the application of water to the land, and the economic use of fields and crops comprise the general subjects of the course. Five exercises a week.

*Spring Term.*—Theory of Horticulture. The student having largely completed his biological studies, is prepared for a discussion of the principles on which horticultural methods are based. Propagation, thinning, pruning, plant breeding, the influence of environment, and similar topics are the subjects investigated. Five exercises a week.

*Senior Year.—Winter Term.*—Stock Feeding.—This subject includes the chemistry of feeding stuffs, the making of rations, and more particularly a careful inquiry into the nutritive value of stock-foods available on New Mexico ranches. It is hoped that feeding experiments will be inaugurated during the winter of 1899-1900, and the student will thus have an opportunity for practice in scientific feeding.

*Equipment.*—The College Farm includes 108 acres under irrigation. In addition to carefully arranged experiments in

many lines of agriculture and horticulture, which cannot fail to be instructive and interesting to the student, the farm orchards include many varieties of apples, pears, peaches, plums, and apricots. Over a hundred varieties of grapes are grown, and with the next season extensive plantations of small fruits will be made.

During the year facilities for experiments in stock feeding are promised and the equipment of the Department will be largely augmented. The vegetable garden, flower garden and green house are ample for present needs.

*Student Labor.*—While it is not the policy of the Department to make labor for students, industrious workers among the students will be given the preference in the work of the farm and gardens, so far as the short hours at their disposal can be employed with profit to the Department. Students in the Agricultural Course will be encouraged to spend some portion of their time in field work, and for all labor the usual wages offered in the community will be paid.

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## ENGINEERING.

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FRANK W. BRADY, Professor.

CHARLES MILLS, Instructor in Shops.

This department offers two regular courses, each four years, in length, Mechanical Engineering and Civil Engineering.

Instruction is given by lectures, recitations and practice, so combined as to constitute a symmetrical course of study. The endeavor is to provide the student with a broad foundation of general and theoretical knowledge, together with a liberal amount of practice in the line of his chosen profession.

The engineering students confine themselves to shop work and mechanical drawing during the first two years, while other students have practice work in those lines pertaining to the courses selected. Much time is necessarily devoted to higher

mathematics and to technical subjects; yet certain fundamental studies, necessary to a broad and liberal education, such as physics, chemistry, languages, literature, political economy and history, are amply provided for.

In this course the student is given a thorough training in the theoretical branches underlying the science of machines, together with a clear understanding of the practical construction of mechanical devices. In addition to the advanced mathematical and general studies common to other courses, this course includes instruction in free-hand and mechanical drawing, descriptive geometry, theoretical and applied mechanics, hydraulics, engineering structures, metallurgy, electrical engineering, strength of materials, mechanism, machine design, steam engineering and shop practice.

*Free-hand Drawing.*—The importance of free-hand drawing as a discipline for the powers of observation, can hardly be overestimated. It educates the eye to note accurately all details of position and form, and trains the mind and hand to reproduce correctly what the eye sees. Free-hand drawing is begun in the preparatory department and continued for two terms in the Sub-Freshman class.

*Mechanical Drawing.*—All engineering students take mechanical drawing during two terms of the Freshman year and two terms of the Sophomore year. This subject embraces instruction in the use and care of drafting instruments, exercises in geometrical construction, lettering, plane projections, shading and coloring; followed by detail and assembled working drawings of machinery with tracing and blue prints therefrom.

During one term each of the Junior and Senior years, mechanical drawing is merged into machine design, of which it forms an important part, and affords constant opportunity for further practice in making drawings of standard types of machinery. The work in this subject consists chiefly in the design of the elements of machinery, such as bolts, rivets and riveted joints, journals and bearings, pulleys, gears, etc.

*Descriptive Geometry* is taught during the second term of



the Sophomore year. In this the principles of orthographic projection, development of lines and surfaces, etc., are fully discussed in the class room; and a great variety of problems, illustrating both general and special cases, are solved and constructed by the student in the drafting room.

*Elementary Mechanics.*—In this subject the general laws of statics and dynamics are studied with reference to solids, liquids and gases; and the fundamental principles are applied to the solution of a wide range of problems.

*Mechanism.*—Under this head are studied the principles underlying the action of the elementary combinations of which all machines are composed; the communication of motion by gear-wheels, belts, cams, screws, link-work, etc.

*Strength of Materials.*—This subject embraces a study of the characteristics, method of manufacture, and useful properties of the various materials of construction; and a mathematical investigation of their strength, elasticity, and other physical properties.

*Hydraulics* includes the study and application of the principles of the subject to the various problems involved; such as the flow of water through orifices, short and long tubes, conduits, and in open channels; gauging streams, measurement of waterpower, etc.

*Steam Boilers.*—Under this head the various forms of steam boilers are studied. Attention is given to the various details in their design and operation, such as the size and number of flues, thickness of plates, style of riveting, bracing, the amount of grate and heating surface, etc.; also the various attachments.

*Engineering Structures.*—This subject embraces a study of the design and construction of foundations and superstructures, the selection of materials, superintendence, specifications, etc.

*Steam Engine.*—The student makes a study of the general principles of the steam engine and the various types of engines and boilers in common use, and investigates the many problems relating to their structure and efficiency.

*Metallurgy.*—This includes a study of the various fuels and refractory materials; the principal iron ores and their re-



duction according to modern methods and the processes employed in the preparation of the finished products.

In *Electrical Engineering* the student is drilled in the fundamental principles of electric power generation and the application of electricity to lighting, street railway, and mining work.

*Roofs and Bridges.*—In roofs, bridges and arches the student will be given a drill in determining stresses by both the graphical and analytical methods, and in making drawing of the details of construction.

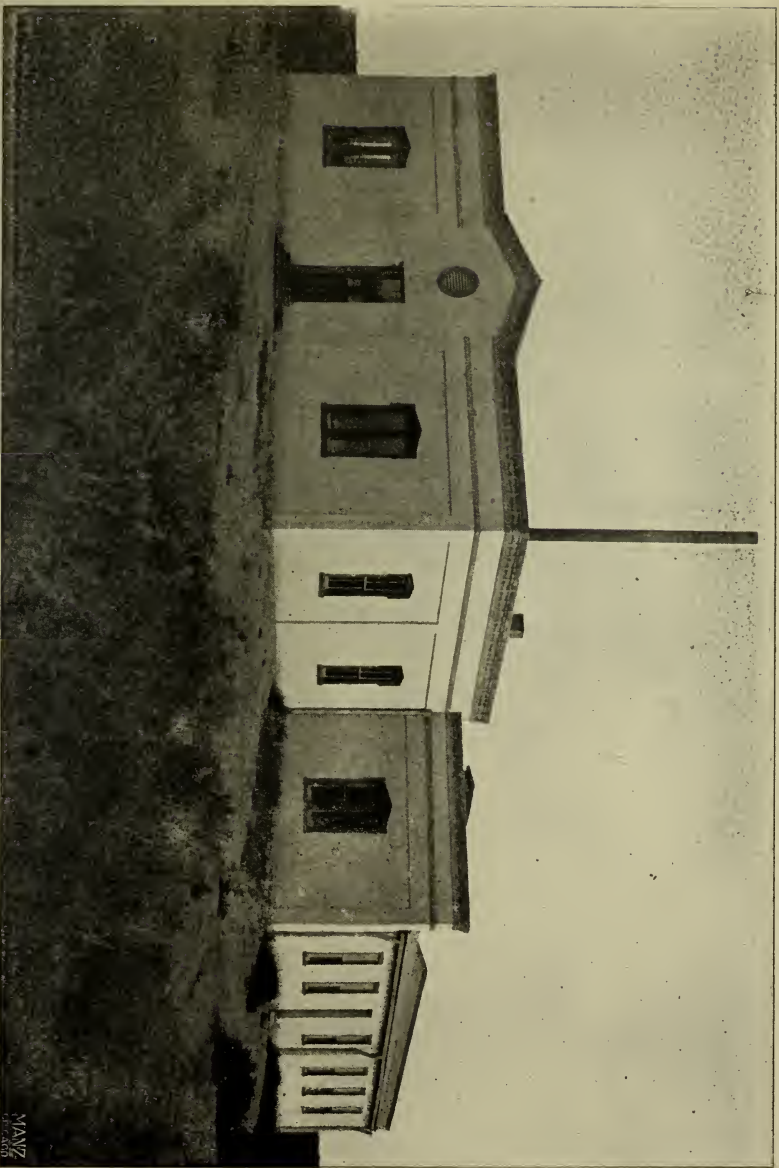
*Analytical Mechanics* embraces a study of the laws of equilibrium, motion, work, and energy, as applied to particles and rigid bodies; also a study of the centre of gravity and the movement of inertia.

*Engine and Boiler Trials.*—In this subject the student makes a study of the principles and the methods involved in determining the efficiency of engines and boilers and to apply the same in the engineering laboratory.

*Shop Practice*, offering, as it does, practical illustrations of the precepts taught in the class room, is a most essential part of the Mechanical Engineering course, and this work is given a prominent position. The work is begun and is required of all male students in the Sub-Freshman class and continues through the nine terms of the regular engineering course. This work embraces carpentry, wood turning, blacksmithing, foundry practice, pattern making and general machine work. The manual training is supplemented by lectures on the various tools and machines used in the laboratory.

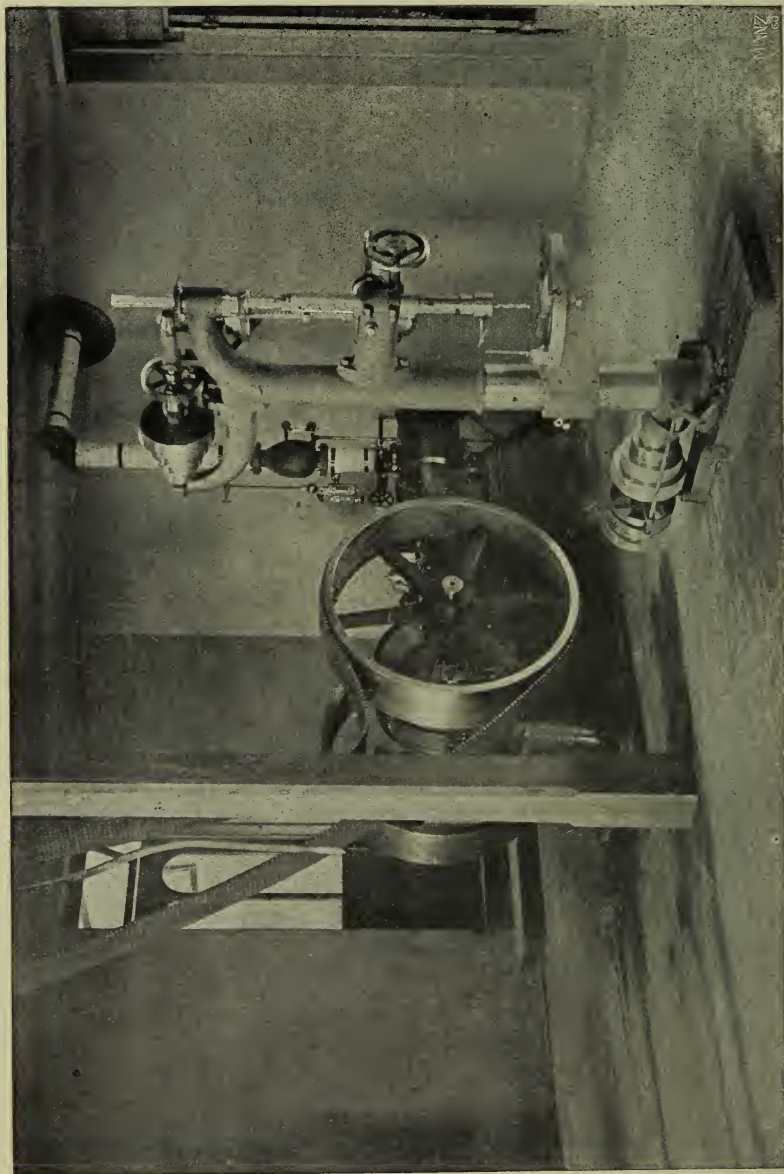
*Equipment.*—The department has two commodious buildings devoted to its work. One has rooms for a blacksmith shop, foundry and storage. The other contains two recitation rooms and a hall, an engine and boiler room, and rooms for wood work and for machine work.

In the forge room are eight forges of the latest model, with improved underground arrangements for the blast and exhaust pipes. Each forge is fitted with a full set of tongs, hammers, swages, fullers, etc. An 18-inch drill press and a punching and shearing machine form part of the outfit of this section.



ENGINEERING BUILDING

MANZ  
CHICAGO



ENGINE IN THE MACHINE SHOP

The wood room has seven turning lathes, one combination rip and cross-cut circular saw, one Fox trimmer, a forty-inch grind stone, one 18-inch x 6-inch surface planer, one No. 3 patent strain scroll saw and a good supply of small tools and appliances.

In the machine room there are one 16-inch x 6 foot tool room lathe with compound rest and taper attachment, one 14-inch x 8 foot standard engine lathe, one 24-inch x 24-inch x 6 foot planer, one 22-inch power drill press, one improved double wheel emery grinder; also a large number and good assortment of drills, chucks, small tools and machine attachments. A 12-H. P., 250 volt dynamo and an 8-H. P. motor with switch board instruments, a standard steam gauge tester, and a steam indicator, and planimeter, also belong to the machine room equipment. A well arranged tool room contains an assortment of supplies and special tools for general work.

The power equipment consists of one 40-H. P. tubular boiler, feed water purifier, duplex pump and Rumsey deep-well pump, one 8-H. P. Shipman engine and one 30-H. P. Weston automatic engine. A 15-H. P. gasoline engine is to be added for the coming year.

*Surveying.*—The instruction in this subject will be such as to render the students familiar with the principal instruments and methods used in plane, topographical, and other forms of surveying. Levels will be run, surveys made, notes plotted and areas computed. Students will have practice in determining the true meridian and latitude, by observations of the north star and of the sun.

*Equipment.*—This consists of a surveyor's compass, two transits, one of which has a gradienter and solar attachments, engineer's level, plane table, aneroid barometer, hand level and clinometer, optical square, pantograph, chains, tapes, leveling rods, poles, pins, etc. A current meter, hook gauge and other instruments are available for work in hydraulics.

An excellent department library, containing standard works on subjects pertaining to the engineering professions is accessible to students.



*Thesis.*—As a condition of graduation, each Senior in the Engineering course must prepare an acceptable thesis and thesis drawing which will remain the property of the college.

*Deposits.*—Students taking any of the practice work, (exclusive of chemistry) in the Engineering course, will be required to deposit at the beginning of the work each year five dollars, to cover breakege or damage, and to make additional deposits at any time it becomes necessary to meet the expenses so caused. At the end of the year or on completion of the work, the amount not forfeited will be returned.

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## CHEMISTRY.

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ARTHUR GOSS, Professor.

R. F. HARE, Instructor.

Chemistry is taken by all regular students during the second term of the Freshman year and throughout the Junior year.

*Freshman Chemistry.*—The Freshman work in chemistry consists of a study of the subject as outlined in an elementary text book. The work will be supplemented by frequent experiments performed before the class. The Freshman chemistry is intended as a preparation for the different branches of science taught later. The time required for recitations is one hour four times per week.

*Junior Chemistry.*—The work during the first and second terms of the Junior year will consist of a study of the principles of the science as outlined in a standard text book, and will be supplemented by frequent exercises in the laboratory. The Junior work will be considerably more advanced than that given in the Freshman year. The time required of the students, besides that necessary for the preparation of lessons, will be one hour daily.

During the third term of the Junior year, two hours daily will be spent in the laboratory in the study of qualitative analysis. Each student will be provided with a complete set of apparatus and reagents by means of which any ordinary com-

pound may be analyzed. The student will thus learn by actual practice the various methods of separating the different elements.

*Elective Chemistry.*—Chemistry is an elective study throughout the Senior year. For students who take chemistry, the work of the first term will consist of laboratory practice in general quantitative analysis. During this term students will receive instruction in the use of the balance and in general quantitative manipulation. Each student will be required to make some of the fundamental quantitative determinations, thus becoming familiar with quantitative processes by actual practice. The nature of the work done during the last two terms of the Senior year, will be left largely to the choice of the student; but, in general, will consist of work along some line of original investigation. Thus an investigation may be undertaken concerning waters, soils, ores, forage plants, methods of analysis, or whatever subject the student may be particularly interested in; provided the same is approved by the professor in charge of the department.

*Assaying.*—For the accommodation of those of our students who desire to take up this branch, instruction is given in the fire assay of gold, silver and lead ores, and in the wet assay of copper, iron, lime, silica and various other substances. The work is supplemented by a course of reading in standard books on assaying, metallurgy, analytical chemistry, etc., a considerable number of which are to be found in the Department Library.

Students taking assaying are required to take the regular work in chemistry and also the course in geology and mineralogy given in the institution.

No student will be admitted to the course in assaying who has not had sufficient preliminary training to enable him to carry the work.

Instruction in assaying will begin the first term and will continue throughout the year at such time as does not interfere with the regular work in chemistry.

#### EQUIPMENT.

In December, 1897, the chemical department was moved into new quarters. The department now occupies practically



the entire lower floor of the new Science Hall. The increase in room has made possible the complete separation of the college and station chemical work, and allows of better work being done in both divisions. Three large rooms and a smaller store room have been set apart for the station work; and five rooms and a store room, for use in the instruction of students. Besides the above, a small brick building has been erected at a safe distance from the main building in which to store gasolene and other combustible and explosive substances.

The rooms set apart for use in the instruction of students are as follows:—

1. A large qualitative laboratory for students beginning the study of chemistry. This laboratory is fitted with work desks which are supplied with gas, water, and drain, and have drawers and lockers with combination locks. The qualitative laboratory also contains, among other things, a sink, and a fume closet for work in which noxious gases are present.

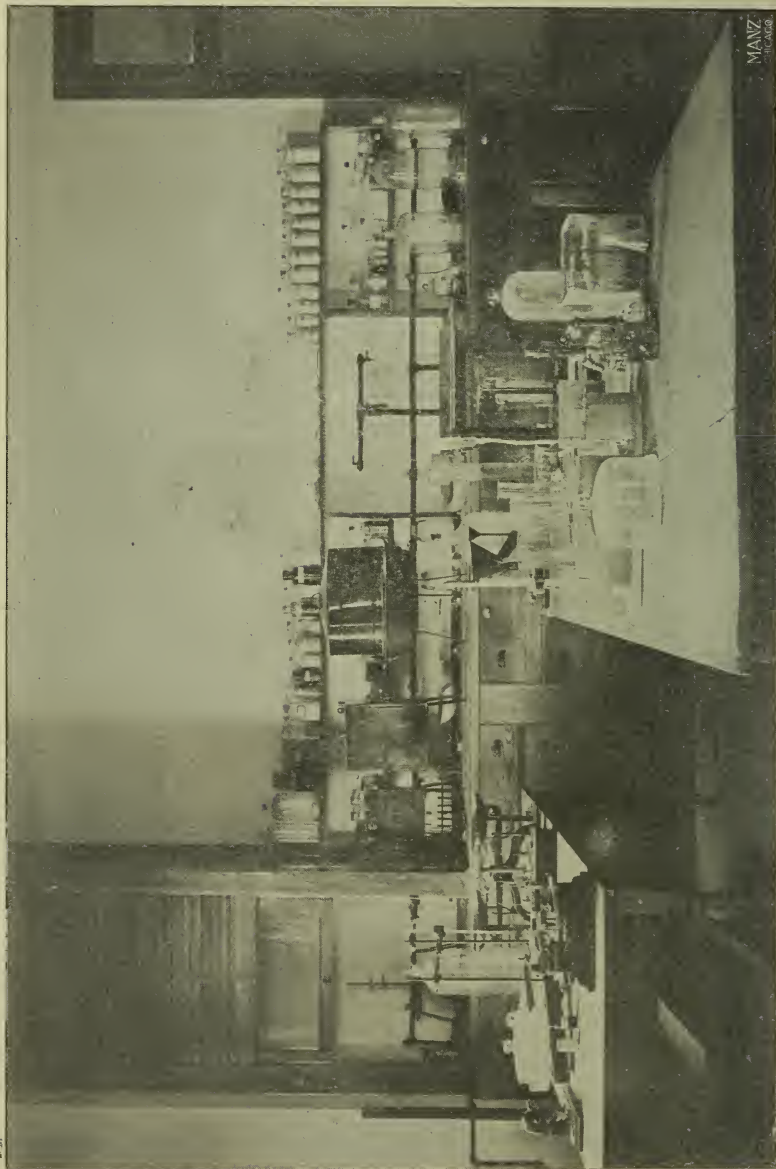
2. A quantitative laboratory for the use of advanced students. This laboratory is supplied with two entirely new, thoroughly equipped, work desks fitted with gas and water pipes, a drain trough through the centre, a bottle rack on top, and drawers and lockers with combination locks. This laboratory also contains a first-class large fume closet and a sink.

3. A fire-proof assay laboratory, which contains six gasolene crucible furnaces and two muffle furnaces. This laboratory is also supplied with a Bosworth ore crusher, a sampling plate, a complete set of sieves, crucibles, tongs, cupel moulds, and other accessories necessary in a well equipped laboratory of this character.

4. A weighing room, opening into the quantitative and assay laboratories. This room is fitted with a substantial balance table mounted on brick piers in contact with the ground, thus insuring freedom from floor vibration. This room is, at present, supplied with an Eimer and Amend gold-plated assay balance sensitive to the one two-hundredth of a milligram, two chemical balances, and a heavier balance for rough weighing. This room is also provided with a large table on which to mix



APPARATUS IN CHEMICAL LABORATORY



LABORATORY OF PLANT PHYSIOLOGY AND BACTERIOLOGY

MANZ  
111-111-111



assay charges etc., and with a case for sample bottles.

5. A lecture room, supplied with a lecture desk, a sink, gas, blackboards, and other accessories.

6. A conveniently-located store-room for chemicals and general laboratory supplies for students.

The laboratories used for the chemical work have brick walls, and wooden ceilings, fourteen feet high. Each laboratory is also supplied with one or more ventilating flues which aid in the removal of fumes and ventilation of the rooms. The general equipment of the laboratories has been very materially increased, and is modern and first-class in every particular.

The laboratories fitted up for the accommodation of the Experiment Station work contain, among other things, three work desks supplied with gas, water, and air exhaust pipes for rapid filtration, a commodious hood to carry off noxious gases, apparatus for the determination of nitrogen by the Kjeldahl method, a titration shelf and system of burettes, and a first-class still for the preparation of distilled water. The Station equipment also includes, a balance table mounted on brick piers, in contact with the ground, a Herzberg and Kuhlmann short beam automatic analytical balance, a Springer torsion balance, a Scheibler's polariscope, an imported mill for grinding samples, and about \$500 worth of platinum ware.

While the Station laboratory is not designed for the use of students, the work carried on there serves to illustrate actual practical analytical work.

The chemical department also has a collection of mineral specimens for class use, and quite a large department library of reference books and periodicals.

The gas supply for the department is furnished by a new, 200 light, Matthews gasolene gas machine, which is provided with an automatic mixer whereby the gas is kept uniform in quality.

The water supply for the department is furnished by a deep

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well on the college grounds, the water of which is of much better quality than most of the well waters of the valley.

#### FEES.

At the beginning of the work in chemistry in the Junior year, and also at the beginning of the work in the Senior year, each student will be required to deposit five dollars with the college Clerk, to cover breakage of apparatus. At the close of the year, or upon withdrawing from the class, the balance of the deposit, after deducting cost of broken apparatus, will be returned to the student.

At the beginning of each term, each student taking work in assaying will be charged five dollars to cover cost of gasolene and fluxes used. None of this fee will be returned unless the student should withdraw before the end of the term. Besides the above fee of five dollars, each student taking assaying will be required to deposit ten dollars at the beginning of each term, to cover cost of crucibles, scorifiers, and other apparatus used up or broken during the term. The balance from this deposit which is not used will be returned to the student at the end of the term.

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#### ZOOLOGY.

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J. D. TINSLEY, Professor.

*Zoology.*—Zoology is studied during the three terms of the Sophomore year. Four hours per week during the first and the second, and three hours per week during the third, term. The first and second terms are devoted mainly to the invertebrate animals, and the third term to the vertebrates. The work consists in the dissection of available types, supplemented by lectures, followed by recitations on the laboratory work and lectures. The subject of classification is dealt with almost entirely in lectures. The fundamental principles of animal physiology are emphasized throughout the course. The aim of this course is to give the students a fair knowledge of the structure of

animals is general, and of the functions of their various parts.

Especial attention is paid to teaching the students to observe, and think for themselves, and to accustoming them to the use of reference books. The laboratory guides used are Needham's "Elementary lessons in Zoology," Colton's "Practical Zoology," and Overton's "Applied Physiology."

*Physiology and Hygiene.*—Five hours per week, during the first term of the Junior year, are devoted to these subjects. The work consists of recitations in Martin's "Human Body, Advanced Course," accompanied, as far as practicable, by demonstrations.

*Equipment.*—This department occupies rooms in the second story of the Science hall. The laboratory is well equipped with dissecting instruments, magnifiers and other necessary apparatus. There is a set of Bock Steger models for illustrating human anatomy. A beginning has been made on a collection of the more common animals of the vicinity, and is added to from time to time. The department library is well supplied with works on Zoology, Anatomy and Physiology. Students are held responsible for books and apparatus while in their charge.

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## ENTOMOLOGY.

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T. D. A. COCKERELL, Professor.

*Entomology.*—Juniors in the Agricultural course will be required to devote four hours per week, during the second and third terms to the study of entomology. This course will give the students a general idea of the principal groups of insects and their modes of life, especial attention being given to injurious insects, and means of destroying them. Scientific students of the same year may elect this work if they so desire.

*Study of Scale-insects.*—Owing to laws recently made, and others about to be made, there is a considerable demand for expert examiners of fruit trees and nursery stock, who know the different scale-insects and similar pests when they see them.



Special instruction is offered in the subject of coccidology, for periods of one term or longer, as may be desired.

*Graduate Work.*—Every facility will be offered to students of graduate rank, whether of our own institution or any other who may wish to conduct original investigations in the laboratories.

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## BOTANY, GEOLOGY AND PHYSICS.

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E. O. WOOTON. Professor.

J. F. BENNETT, JR., Assistant.

*Elementary Botany.*—Students of the Sub-Freshman class will devote four hours per week during the second term and three hours per week during the third term to the subject of Elementary Botany as outlined in Spalding's Introduction to Botany. The greater part of the time will be devoted to the study of the gross anatomy of the Phænogams, but a few simple experiments will be performed to demonstrate the principles of plant growth.

*General Botany.*—Juniors of the Agricultural and Scientific courses will devote five hours per week during the first term and eight hours per week during the second term to the study of botany. The work in this subject will be particularly designed to show the developmental history of plants. Types will be examined in the usual laboratory way, and students will thus become acquainted with the morphology and minute anatomy of plants and at the same time acquire a knowledge of those fundamental differences in structure which are the basis of all botanical classification. During the spring term these students will devote five hours per week to a course of lectures and laboratory work upon cultivated plants and the commoner parasitic fungi of economic importance.

*Elective Work.*—Seniors are required to elect a certain amount of work, which shall generally be directly accessory to their theses. The botanical department will offer courses of

investigation and more or less original research in plant morphology, physiology and systematic botany.

Original investigations in any of these branches of the subject may be elected by graduate students.

*Equipment.*—The laboratories of this department occupy rooms in the second story of the new Science Hall. These laboratories are equipped with all apparatus necessary for the courses outlined above.

The department library is well supplied with books on all subjects relating to the work.

The herbarium contains several thousand plants, and additions are constantly being made. Advanced students, especially in systematic botany, will have access to it in connection with their work.

*Geology and Mineralogy.*—The first term of the Senior year will be devoted to the subject of mineralogy, using Dana's work on this subject as a reference book, and the collection of minerals in the possession of the department as a basis for the work. A portion of the time will be occupied with work in determinative mineralogy, using Foye's Handbook of Mineralogy as a laboratory guide.

The remaining two terms of the Senior year will be devoted to the study of dynamical and historical geology, using Le Conte's Elements as a text-book. In connection with the latter subject, some work in elementary paleontology will be done, using the specimens in the cabinet.

*Elementary Physics.*—Sub-Freshman students will devote three hours each week during the first and second terms to this subject, using Shaw's Physics by Experiment as a text-book. The major portion of the time will be devoted to the fundamental conceptions of matter and force and the laws governing each and the application of these laws in the simpler machines.

*General Physics.*—Sophomores of all courses are required to devote one full year to this subject.

The first term will be devoted to the study of the general laws of matter and force, and the subject of heat; the second

term, to sound and light; and the third term, to the subjects of electricity and magnetism.

Gage's Elements of Physics will be used as a text-book, with Ganot's Physics and Sylvanus Thompson's Elementary Lessons in Electricity and Magnetism as reference books. Particular stress will be laid upon the mathematical side of the subject, as being the best way to grasp its principles.

The Physics Department is supplied with a good laboratory and plenty of apparatus for demonstration purposes. Graduate and elective courses in this subject are not offered at present.

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## MATHEMATICS AND ASTRONOMY.

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C. T. HAGERTY, Professor.

*Geometry.*—The Freshman class study plane geometry in the first and second terms, and solid and spherical geometry and a brief treatise on conic sections in the third term. Original exercises form a large part of the work throughout the year, and constitute an important factor in examinations. Wentworth's Plane and Solid Geometry is the text-book used.

*Algebra.*—Sub-Freshmen begin at involution and complete Milne's High School Algebra through logarithms. In the third term of the Freshman year Algebra is taught one hour per week covering variation, variables and limits, undetermined co-efficients, and binomial theorem (any exponent). In the third term of the Sophomore year, higher algebra is taught two hours per week. It includes permutations and combinations, scales of notation, theory of numbers, and series.

*Trigonometry.*—Plane and spherical trigonometry is taught daily in the first term of the Sophomore year. The functions are treated both as ratios and lines. The fundamental formulæ are carefully deduced, and many practical problems are solved. In order to get a clear conception of the measurement of angles.

students use protractors, trigonometer, and a surveyor's transit.

*Analytic Geometry.*—All students in the Engineering courses are required to take plane analytic geometry in the third term of the Sophomore year three hours per week, and in the first term of the Junior year four hours per week. They solve many problems in order to become familiar with the methods of the subject. Several of the higher plane curves and geometry of three dimensions are studied in the first term of the Junior year.

*Calculus.*—Engineering students are required to study the differential and integral calculus daily in the second and third terms of the Junior year. The methods of rates and limits are employed.

The Scientific students are not required to pursue the study of mathematics after the second term of the Sophomore year, but they may continue the work as an elective if they desire to do so.

The instruction in all branches of mathematics is made as practical as possible.

*Astronomy.*—All Seniors except those in the Mechanical Engineering course are required to pursue the study of Astronomy daily in the first term, four times a week in the second term, and once a week in the third term. Young's General Astronomy is the text-book used. A knowledge of plane and spherical trigonometry, conic sections, and elementary mechanics is necessary to a full understanding of this branch, as the work is not only descriptive and historical in character, but also spherical and practical. Students are required to observe carefully the phenomena presented to them by the heavens. They have practice in solving a variety of astronomical problems from data obtained by themselves with a surveyor's transit. The class meet for night observations once every two weeks throughout the year.

#### EQUIPMENT.

This department has a portable equatorial telescope with  $4\frac{1}{2}$ -inch objective and magnifying powers ranging from 100 to

400, a surveyor's transit with solar attachment, planisphere, star lantern with slides, field glasses, star atlas, protractors, trigonometer, 24-inch slated globe, and Kennedy's dissected geometrical blocks.

The department library contains many valuable books of reference, and several periodicals.

## HISTORY AND PEDAGOGY.

HIRAM HADLEY, Professor.

### HISTORY.

*The Purposes* aimed at in teaching this subject are: (1) to give an idea of the great lines of historical development: (2) to discover the ideas which organize the historical movements: (3) to stimulate self-directed investigation: (4) to train the judgment in the discrimination of motives and the results of action: and (5) to inspire the student with a desire to be something more and better than a passive observer in the progress of humanity.

The work embraces the following:—

*General History.*—This subject, although required for admission to the Freshman class, is taught by the professor of history. It is pursued during the Sub-Freshman year, four hours per week. In the limited time allotted, constant effort is made (1) to give to the student a large number of important individual facts, or events, great care being taken to not burden the memory with unimportant ones: (2) from these, to group as many related ones as possible into general notions, and thus to connect causes and results of leading historic movements.

The principal texts used are Fisher's Brief History of the Nations and Myers' General History.

*History of Education.*—During the third term of the Sophomore year, students in the course in Pedagogy pursue this subject five hours per week. From a new point of view, this



affords a valuable review of many topics passed over in General History, and it is also a fitting introduction to the work in Pedagogy, of which it forms a part.

The text in use at present is Painter's History of Education, which is supplemented by Quick's Educational Reformers.

*History of Civilization.*—During the last term of the Senior year, five hours per week, students in the course in Agriculture, and those of the Scientific course who have not elected Pedagogy, will pursue this subject. The main text used at present time is Guizot's Lectures on the History of Civilization in Europe.

#### PEDAGOGY.

It is not the intention of the Board of Regents and the Faculty to give this subject great prominence, at present. But experience has shown that many of the students of this college engage in teaching, to a greater or less extent. It is believed that it is due to these and to the common schools of the Territory, that opportunity should be afforded for obtaining an introduction to the theory and practice of teaching. To this end the following elective and substitute work is offered to students of the Scientific course.

*History of Education.*—(See above, under "History.")

*Arithmetic.*—During the third term of Sophomore year, four hours per week, this subject will be thoroughly reviewed from the standpoint of a teacher. Students will not only become very familiar with the subject matter, but every recitation will be so conducted as to illustrate philosophical method. Students will also be exercised, under supervision, in conducting the recitations of this class and of the classes in Arithmetic in the Preparatory department.

*Elementary Psychology.*—During the first term of the Junior year, five hours per week will be devoted to this subject. Disregarding the many fine discriminations properly pertaining to more advanced work, an attempt will be made to make the student familiar with such a popular understanding of mental phenomena as is essential to a study of pedagogy as a science.



On the physiological side, he will previously have had ample training in the Zoological laboratories. A text-book of about the same grade as Halleck's Psychology and Physic Culture will be used.

*Language and Geography.*—During the second term of the Junior year, in connection with the reading of essential portions of McMurry's Method of the Recitation, students will have a training in these subjects, or portions of them, similar to that outlined for Arithmetic above.

*School Management, School Law, and Practice Teaching.*—During the third term of the Junior year, five hours per week, the time will be divided among these topics, in such proportions and in such manner, as best judgment may dictate at the time.

*General Remark.*—This course is not intended as a rival to courses given in professional Normal Schools. So much is introduced to partially meet a pressing demand. Yet, when we take into consideration the liberal amount of Academic training contained in it, especially the Scientific assisted by the use of ample equipment in the way of laboratories of various kinds, it is believed that the graduate will enter upon the work of teaching with a reasonable degree of assurance of success.

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## ENGLISH AND LATIN.

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F. F. BARKER, Professor.

*English.*—In the Sub-Freshman year Lockwood's Lessons in English is used as a text-book. The following authors also are studied: First term, Legend of Sleepy Hollow (Irving), Vision of Sir Launfal (Lowell); second term, Gulliver's Voyage to Lilliput (Swift), Golden Legend—Part I. (Longfellow); third term, The Sir Roger de Coverly Papers (Addison), Golden Legend—Part II. Five recitations a week throughout the year.

In the Freshman year the study of rhetoric is continued. No text-book is used; but common errors in grammar and rhetoric are noted and informally discussed as they come up in the students' themes. A careful study is made also of the fol-

lowing works: First term, Robinson Crusoe (Defoe), Prisoner of Chillon (Bryon); second term, Hero as a Prophet (Carlyle), Deserted Village (Goldsmith); third term, Warren Hastings (Macaulay), Courtship of Miles Standish (Longfellow). Five recitations a week.

The work during the Sophomore, Junior, and Senior years consists of weekly themes and the following parallel reading: Sophomore year, Silas Marner (Eliot), Elegy in a Country Churchyard (Gray), In Memoriam (Tennyson); Junior year, L'Allegro and Il Penseroso (Milton), Essay on John Milton (Macaulay), Words of Lincoln; Senior year, Spectator (Addison), Culture and Anarchy (Arnold), Study of Words (Trench). One recitation a week; except in the last term of the Senior year, when the class meets three times a week.

Theme-writing is made the central feature of the course in English. Students are expected also to do satisfactory written work in other departments of the College.

*English Literature.*—A full year's course is offered in this work, as an elective for Juniors. The authors studied next year will be as follows: First term, Shakespeare—Two plays; second term, Homer's Epic—in a translated form; third term, Tennyson—Idylls of the King. The work in English Literature may be continued as an elective in the Senior year.

*Latin.*—A two years' course is offered, as an elective in the place of Spanish in the Freshman and Sophomore years. In the Freshman year Heatley's *Gradatim* is used as a text-book, and the student becomes familiar with the common inflected forms. In the Sophomore Year Lhomond's *Viri Romae* is read, and the work in grammar continued. Considerable attention is given to the points of relation, both etymological and grammatical, between the English language and the Latin; also to questions of classical mythology and Roman history. The Roman pronunciation is followed.

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## SPANISH.

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IDA M. JONES, Professor.

As may be seen from the courses of study, Spanish is optional with Latin in all the courses throughout the Freshman and Sophomore years; and in the Junior year in the Scientific course, it is optional with higher mathematics and English literature.

Situated, as this College is, near the border of the Republic of Mexico, with Spanish in common use among the majority of our people, the opportunity here afforded to acquire a working knowledge of this language is certainly excellent, and should be improved by all who expect to enter upon any field of labor among the Spanish-speaking people.

In the time allotted to this study, a fair knowledge of the language may be obtained.

The elements of the language are acquired by the study of De Torno's Combined Method with Worman's First and Second Books. Conversation and sight reading will be given twice a week with additional work in dictation.

The work in the Sophomore year will consist of the study of Matzke Readings, followed by compositions, oral and written translations of English selections, Spanish idioms, and the study of Knapp's Grammar.

In the Junior year the students will be required to do private reading from Cervantes, Calderon, Moratin, and others. Translations of Moratin's comedy, *El sí de las Niñas*, selections from Don Quixote and Gil Blas, the writing of business letters, and the study of Spanish literature, will be included in this work.

The following books of reference are accessible to the students: Sales' Grammar, Becker's Spanish Idioms, Ticknor's History of Spanish Literature.

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## ELOCUTION AND PHYSICAL CULTURE.

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ELLEN F. GIBSON, Instructor.

*Elocution.*—Systematic instruction will be given in reading.

particular attention being paid to articulation, inflection, and emphasis. Voice culture will include tone development and projection. Lessons in elocution will be given four times a week during the first term of the Sophomore year, once a week during the second term of the Junior year, and twice a week during the third term of the Senior year.

*Physical Culture.*—The Physical culture will include the Delsarte system of physical culture. Many forms of physical culture are too violent for girls and women, but the Delsarte system is beneficial and suitable for everyone. Instruction will also be given in the Swedish system of gymnastics as well as in free gymnastics. This work is designed to develop gracefulness of carriage, ease of appearance in public, and freedom of movement, as well as greater bodily vigor and better health. Lessons in physical culture will be given daily, during the second term of the Sophomore year.

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## MUSIC.

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MRS. LAURA FRENGER, Instructor.

Arrangements have been made so that all students who desire to take either instrumental or vocal music are able to do so in a department distinct from the College as to the payment of fees, but under such rules and regulations as the Faculty may make. Instrumental music will be confined to the piano and organ. Fees for music will be about what are usually paid in good schools.

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## STENOGRAPHY DEPARTMENT.

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F. E. LESTER, Instructor.

To meet the demand for instruction in Stenography and Typewriting, the above department is maintained in the College. To avoid interference with the regular college work, the work

of this department is kept distinct, with certain requirements and a definite course of study.

*Requirements for Admission.*—Students must be at least sixteen years of age, and have completed the work required to enter the Sub-Freshman class, or its equivalent. Graduates of any commissioned high school in the Territory will be admitted without examination. All other applicants will be examined, unless able to show that they have completed the required work.

Students will not be permitted to devote their time exclusively to Stenography and Typewriting, unless they can show to the satisfaction of the Faculty that they have completed the additional studies required in the course. Students in this course enjoy the same library privileges as the College students. The Course of Study is as follows:

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COURSE OF STUDY.

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<i>1st Term.</i>	<i>2nd Term.</i>	<i>3rd Term.</i>
English .....5	English .....5	English.....5
Stenography .....5	Stenography. ....5	Stenography .....5
Spelling..... 5	Spelling..... 5	Spelling .....5
Spanish, optional.. 5	Spanish, optional 5	Spanish, optional .....5

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PRACTICE—Stenography, each term, 5.  
Typewriting, each term, 5.

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(NOTE.—The figures denote the number of hours per week devoted to recitation and practice.)

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The principal object of this course is to thoroughly qualify the student to become a competent shorthand and typewriting amanuensis, able to accept a position upon the completion of the course. To this end a large portion of the time is devoted to stenography and typewriting. The remaining studies of the course are such as to strengthen the student in those subjects which are necessary to the competent stenographer.

*Shorthand.*—Graham's Standard Phonography is the system taught, the text book being Graham's Hand Book, supplemented by work in the 1st and 2nd Readers and Inter-column Reporting

Book. The first term is devoted to elementary work,—a thorough study of the principles of shorthand; the 2nd term, to the intermediate grade,—covering word-signs and outline drill; and the third term to the advanced grade, in which attention is confined largely to business and other dictation.

*Typewriting.*—The work outlined in typewriting includes fingering, touch, copying, letter writing, legal and commercial forms, spelling and punctuation, writing from dictation, mechanism and care of the machine, speed exercises, and transcription from shorthand notes. A complete text book,—Torrey's Practical Typewriting,—is studied in connection therewith. Work absolutely free from errors is insisted on throughout. The department is equipped with 1 New Model No. 7 Remington machine, 5 No. 6 Remingtons, 1 No. 2 Remington, and one New Model Smith Premier. Opportunity is thus afforded students for practice on both single and double keyboard machines.

*English.*—A good and practical knowledge of the best English is a necessity to the student in shorthand; it is the foundation upon which all his stenographic acquirements rest. The English work required in the course is the regular class work of the Sub-Freshman Class. Students of sufficiently advanced standing in English, or who have already completed the Sub-Freshman English or its equivalent, will be required to take the regular Freshman Class English.

*Spanish.*—A strong and commendable feature of this course is the provision made for the study of the Spanish language throughout the year. There exists a strong and growing demand for Spanish speaking stenographers which has never been adequately met; and the experience of the past five years has shown conclusively that the conditions provided by this course are peculiarly well adapted to fitting English-Spanish stenographers for active positions. The advantages here offered are, indeed, almost unique. The calls upon this College for competent Spanish and English stenographers during the past few years far exceed the supply; and it is no exaggeration to state that the demand for such is practically unlimited. Although this de-



mand has come principally from Mexico, it exists also in the United States, as well as Cuba, Porto Rico, and elsewhere. The work in Spanish is of such a character as to fit the student for commercial work, and a considerable amount of Spanish dictation is given.

No guarantee is given to any student pursuing this course that he will secure a position upon its completion. There is, however, little doubt of any student satisfactorily completing the course being able to secure a position, and no competent graduate of this department has yet failed to do so.

A Certificate is given to students satisfactorily completing the course and passing an examination, the requirements of which are to be able to take from dictation ordinary business letters at the rate of 100 words per minute and transcribe the same from notes correctly on the typewriter at a minimum speed of 25 words per minute.

A small charge is made at the close of the year for material used by the student in his office work.

It is important that students entering this department should do so at the beginning of the year. It is seldom that one who enters late is able to complete the year's work satisfactorily.

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### PREPARATORY DEPARTMENT.

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R. R. LARKIN, Principal.

ASSISTANTS.—Katherine Doughty, Ellen F. Gibson,

Gerakline Combs.

This department occupies the lower floor of the main building and, though under the control of the President and Faculty, is quite distinct from the other departments in its organization and discipline.

Its aim is to provide a thorough common school education which shall fit the pupil for the duties of every day life or for admission to the Sub-Freshman class of this college. There are

four regular classes and one special class, each in charge of a competent teacher. The special class is designed to meet the needs of those persons of somewhat mature age who, through lack of early opportunities, are not prepared to enter the regular preparatory or collegiate classes; and those foreigners whose educational qualifications, except an insufficient knowledge of the English language, would admit them to a regular preparatory or collegiate class. The course of study for this class cannot be definitely outlined. Each pupil, however, will be prepared as quickly as possible to enter a regular class, and tentative promotions will be made at any time upon the recommendation of the teacher in charge.

For admission to the special class candidates must be at least sixteen years of age or must possess all the requirements for admission to a regular class except a sufficient knowledge of the English language.

For admission to the lowest regular (D) class of this department candidates must give satisfactory evidence of having completed work as follows:—

1. Arithmetic,—an equivalent of the work covered by White's Complete Arithmetic to Common Fractions (p. 47);
2. Language,—an elementary knowledge of punctuation, capitalization, the parts of speech and the simple sentence;
3. Geography,—an equivalent of the work covered by Mauray's Elementary Geography;
4. Reading,—an equivalent of the work covered by McGuffey's Third Reader;
5. Spelling and Writing,—an elementary knowledge of these subjects.

For entrance to the higher classes candidates must give satisfactory evidence of having completed the work of grades below the class they seek to enter.

Strict adherence to these requirements will be enforced.

Freehand drawing and designing and clay modeling will be taught in all the classes and some informal work will be done in vocal music.

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 Preparatory Department—course of study.

—A.—

Algebra.

Grammar and Composition.

\*Physiology.

\*Civics.

\*Arithmetic.

\*Physical Geography.

Drawing, Modeling, &amp;c.

—B.—

Arithmetic.

Grammar and Composition.

U. S. History.

Reading.

Spelling.

Writing.

Drawing, Modeling, &amp;c.

—C.—

Arithmetic.

Grammar.

Geography.

Reading.

Spelling.

Writing.

Drawing, Modeling, &amp;c.

—D.—

Arithmetic.

Language.

Geography.

Reading.

Spelling.

Writing.

Drawing, Modeling, &amp;c.

\*  $\frac{1}{2}$  year each.

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**COLLEGE SOCIETIES.**


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**COLUMBIAN LITERARY SOCIETY.**


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This Society was organized October 25, 1891, under the name of Alpha Chi. In 1892 this was changed to Columbian, and under this name the society has made steady and prosperous growth. Until about the middle of 1894-95 only men were admitted as members, but since that time the women have had equal membership privileges. The object of the society is to promote and encourage conscientious and practical literary and musical work by discussions, papers, debates, vocal and instrumental music, and such other exercises as the committee on program may prescribe. The requirements for admission to the society are that applicants must be students of good standing in

the College and must pay an entrance fee of one dollar. Dues of fifty cents must be paid each succeeding term. Regular meetings are held each week.

OFFICERS.

E. J. COE.....	President.
HELEN MACGREGOR.....	Vice President.
ETHEL PEET.....	Rec. Secretary.
B. FREEMAN.....	Cor. Secretary.
MAUDE E. MCFIE.....	Treasurer.
TUDIE BAILEY.....	Librarian.
W. C. MEEKER.....	Critic.
A. SANCHEZ.....	Vice Critic.
M. STEELE.....	Marshal.

The New Mexico COLLEGIAN is published and managed by the Columbian Literary Society. It was founded in February, 1893, and has been published regularly since that time Six excellent Commencement numbers have been issued. It is an eight to twelve page journal and contains contributions from students, besides the matter usually found in college publications. It is issued monthly during the college year, and has a good circulation throughout the Territory, and one which is constantly increasing.

The interest of students in the journal has grown considerably since it was founded, and it appears to be especially valued by those who leave college, serving as it does to keep them in close touch with the institution and with their college friends.

Except for the commencement number, the COLLEGIAN is self-supporting, and has every prospect of being a successful journal. It will be enlarged and improved in the future as the support may warrant. All work in connection with its publication is entirely gratuitous. The subscription price is one dollar a year.

W. E. HOLT.....	Editor-in-Chief.
CHAS. POST.....	Business Manager.
MAUD MCFIE }	Local Editors.
C. THOMPSON }	

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H. J. HUBBARD.....	Athletic Editor.
E. J. COE.....	Personal Editor.
W. C. MEEKER.....	Social Editor.
HELEN MACGREGOR.....	Exchange Editor.

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## P. S. & W. E.

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This society was organized by some Freshman girls in 1896. P. S. & W. E. is the name by which the society is known; the real name being one of the secrets. It is purely literary, and the weekly meetings are devoted to sketches of historical characters, current events, debates, book reviews, and essays. Also much original work, such as story writing and impromptu speaking, is done. Once a month open meetings are held. The attendance increases with every meeting. The entertainments given last year by the society were always a success, both financially and socially. The membership has increased somewhat since the organization, and is not limited now to the College proper.

The society has improved wonderfully in the last three years, and, though small, has made for itself a firm standing in College circles. The officers are as follows:

MINNIE NEWBERRY.....	President.
MARIE MACGREGOR .....	Vice President.
ANNIE FREEMAN.....	Secretary and Treasurer.
MARY WICKHAM.....	Critic.
MAUD MCFIE.....	Marshal.
1. Marie Macgregor, {	Literary Committee.
2. Maud McFie, {	
3. Vivette Davis, {	

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## ATHLETIC ASSOCIATION.

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The Athletic Association was organized in October, 1893, and since that time its growth has more than kept pace with

that of the College at large. All the athletics in the institution are under the control of this Association. So far, football, baseball, basketball, and tennis have been the principal sports. Aside from these, there is an annual Field Day, when gold medals are awarded to the winners of the different events. As yet a gymnasium has not been provided, but the erection of one is under consideration. The officers for 1898-99 are as follows:

E. J. Coe.....	President.
C. Thompson.....	Rec. Secretary.
Vivette Davis.....	Treasurer.
W. E. Holt .....	Mg'r Football.
E. J. Coe.....	Mg'r Tennis.
Bert Stephens.....	Mg'r Boys' Field Day.
Tudie Bailey .....	Mg'r Girls' Field Day.
H. J. Hubbard .....	Mg'r Gymnasium.
C. Thompson .....	Mg'r Baseball.
Tudie Bailey.....	Mg'r Basketball.

Executive Board:—E. J. Coe, C. Thompson, Vivette Davis, W. E. Holt, Bert Stephens, D. J. Cravens, H. J. Hubbard, and Morgan Llewellyn.

## ORATORICAL ASSOCIATION.

The New Mexico A. & M. College Oratorical Association was organized in March, 1899. The object of this organization is the promotion of oratorical interests in this college. The Association will hold one regular oratorical contest each year, and the successful competitor will be the A. & M. College representative in the territorial contest.

The officers for 1898-99 are as follows:—

President.....	W. E. Holt.
Vice-President.....	E. J. Coe.
Rec. Secretary .....	Nora Newberry.
Cor. Secretary .....	Chas. Post.



## GENERAL INFORMATION.

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The College of Agriculture and Mechanic Arts offers a great deal to the young people of New Mexico. Every effort will be made to acquaint the people of the whole Territory with its purpose and work. Its courses of study are now equal to those of similar colleges in most of the older states. Students can now get a practical education here in any line they may desire. New schools generally make greater efforts than the older ones, and the energy put forth and the instruction given are often superior. There are a great number of students sent from various parts of the Territory each year to eastern colleges. We ask parents who do this, to investigate this college; and we believe if they will do so, it will get a share of their patronage, and that our people will manifest, in an increasing degree, their appreciation of the bounty of the United States and of the Territory here dispensed. We know it is better fitted to do good work than some of the eastern schools patronized by our people.

Mesilla Park, N. M., is the postoffice and also the general freight and express office of the college.

Strangers will find it more convenient to stop at Las Cruces, and go temporarily to some hotel. They should then report to the president, who will assist them in finding a boarding place.

Students should be on hand the first day of the term. The necessity of this is too seldom realized. New students and those desiring re-examination should report on the day named for this work.

### TEXT-BOOKS.

Text-books are furnished by the college. They will either be sold to the student at cost, or lent. Students are required to deposit \$2.50 in advance, to secure the proper care of college

property and the prompt return of books borrowed. At the close of the year, or when the student withdraws, this deposit is returned unless damage has been done to the books or other college property. When this is the case the damage is assessed against the student, and any balance remaining of his deposit is returned.

This deposit may be increased with students who are notoriously careless. Students who are able should purchase their books. Many of them will be needed after leaving school and they can be made to form the nucleus of a private library, which every student should be encouraged to collect.

#### STATIONERY.

As the college is distant about two miles from any store dealing in stationery, it has been found necessary for the accommodation of students, to carry at the college a small line of articles, such as paper, pencils, pens, etc., which are sold to students, for cash only, at a small profit.

#### FEEES.

Entrance fee, each year, for all students .....	\$5.00
Deposit fee       "       "       "       " .....	2.50
Students in Chemistry, deposit.....	5.00
Students in Engineering, deposit .....	5.00
Students using horse stalls, per term.....	.25
Students not citizens of the United States, per term.	8.50

#### BOARDING.

Although the College, as such, can do nothing toward furnishing board and rooms for men, the accommodations for all classes of students are becoming quite varied and ample. The College has attracted to its immediate vicinity private families, many of whom accommodate some students with board. The price for board, room, lights, etc., in families varies from \$16 to \$20 per month; table board in families about \$15 per month. Not far from the College campus are cottages for rent. These are usually occupied by families who have moved in and taken

up temporary residence for the purpose of educating the children. This is a very satisfactory solution of the boarding problem.

A boarding club for young men—a private enterprise, conducted by Mr. Charles L. Post, address, Mesilla Park,—has been established. It is under the supervision of the Faculty. The buildings are sufficient to room and board about thirty students. Table board is also furnished to some who do not room in the building. So far as expenses are concerned, it is conducted on the co-operative plan. Rooms are furnished with study-tables, but students are expected to furnish their own bed steads or cots, bedding, towels, etc. The food is abundant, healthful, and well-served. The cost to each boarder during the past year has averaged about \$11.00 per month.

Near the College campus are two private boarding houses, which furnish good accommodations at reasonable prices.

#### GIRLS' DORMITORY.

The Girls' Dormitory, situated on the College farm, will accommodate about thirty students. The price of board per calendar month, with room, light, heat, and the washing of a dozen pieces including house linen, is \$15, payable in advance on the first of each month. The rooms are comfortably furnished, but each student must provide comforts, blankets, sheets, pillow slips, towels, napkins, napkin ring, and two laundry bags. The student's name must be plainly marked on all the pieces.

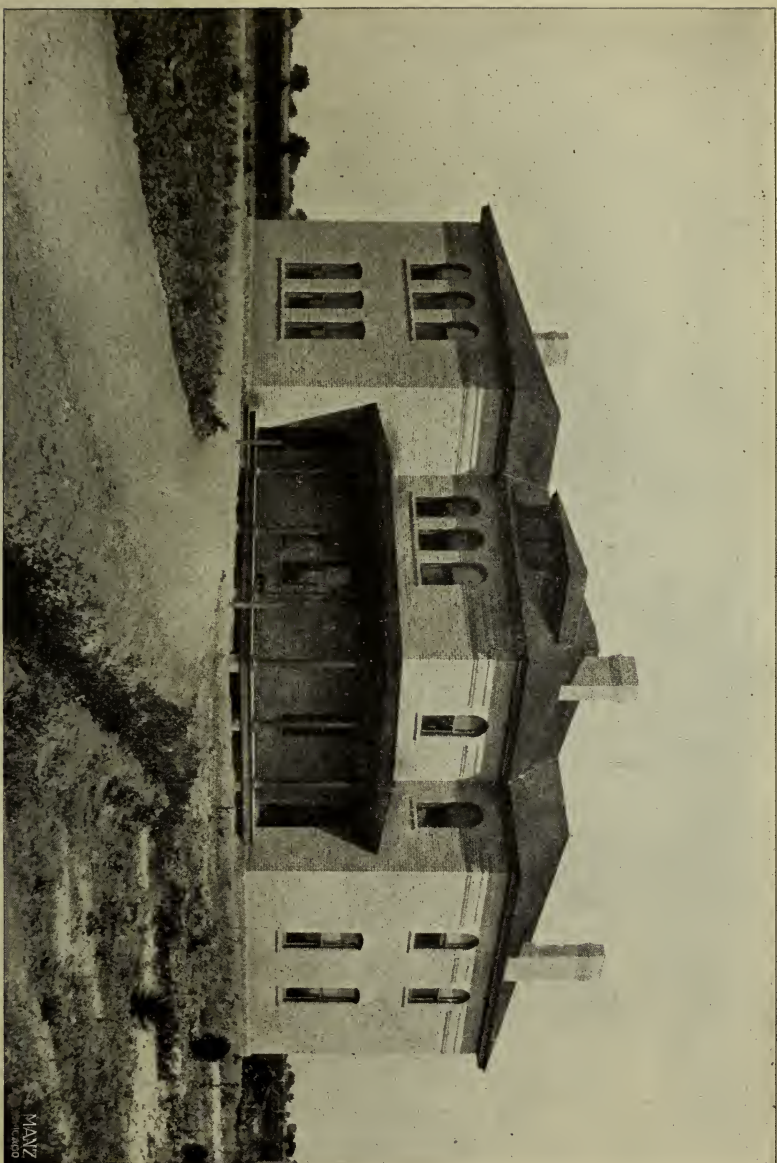
The students are under the general supervision of the Faculty, and in charge of the matron.

For further particulars apply to the matron.

#### ESTIMATE OF NECESSARY EXPENSES.

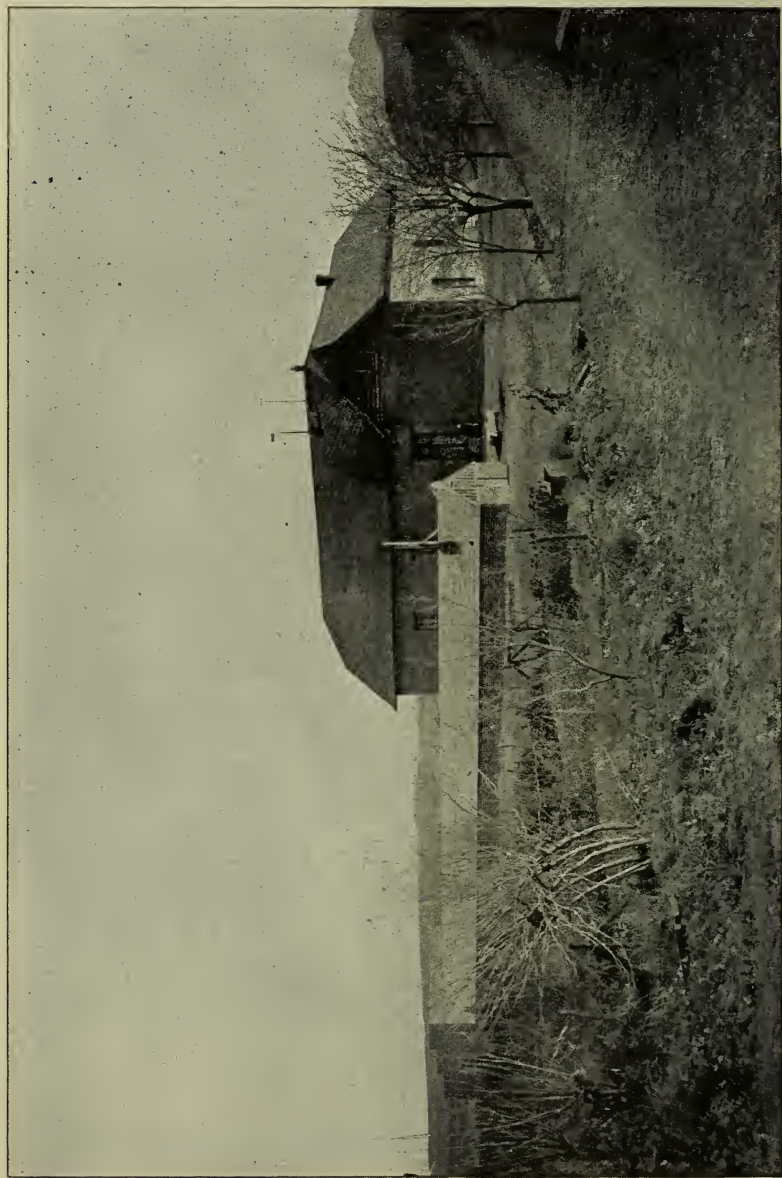
Various College incidentals about.....	\$	7.50
Nine month's board and lodging @ \$15.00.....		135.00
Laundry, per month.... @ 1.00.....		9.00
		<u>\$151.50</u>

To this must be added traveling expenses and "pocket



GIRLS' DORMITORY





GREENHOUSE AND FARM BUILDINGS

money." The demands for the latter are few, and these should be gratified with care.

#### PAID LABOR.

There is a considerable amount of labor on the farm, in the shops, and in the laboratories, that can be performed by students; and the policy will be to give it to students rather than to others. Some students have been able to earn enough during the past year to pay their expenses; but those doing so have had constant employment in some subordinate position. The College can not undertake to furnish work for all students who wish it, or need it, in anything like sufficient amount to pay expenses; and even if it could, the student's time is needed chiefly for study, recitation, and practice. Still, many worthy and industrious students pay a considerable part of their expenses by labor. Preference is given to those who are most trustworthy and meritorious, and who are regular and punctual in attendance, and correct in deportment. This labor is paid for at the rate of from 10 to 20 cents per hour; but the Faculty reserves the right to limit the amount of work any student may do.

#### DISCIPLINE.

It should be impressed upon the youth of New Mexico that by the creation of the College of Agriculture and Mechanic Arts there has been provided for them the fullest and best opportunity to secure a practical education. Students who enjoy the advantages here offered, should be made to realize that to forfeit these privileges on account of their misuse or abuse is a matter of the most serious concern to them.

The faculty assumes that by signing his entrance blank the student agrees to obey the rules governing the institution and he is thereafter held responsible for such obedience.

If, after a fair trial, the influence of any student is found to be detrimental to scholarship, morals, or good order, dismissal will follow. The following are strictly forbidden:—

1.—The indulgence in the use of intoxicating liquors and the frequenting of questionable resorts.



2.—The use of tobacco in any form in or about the college buildings.

3.—All indecent behavior and profane language.

#### RELIGION.

All students will be trained in the principles of morality, but no sectarian teachings will be tolerated in the college. Entire freedom of choice is given the students in selecting the church they will attend. Services are held at the following churches every Sunday: Catholic, Presbyterian, and Methodist; and occasional services are conducted by the Episcopalians. At the Presbyterian church are held meetings of the Young People's Society of Christian Endeavor. With the Methodist church is connected the Epworth League. The Young Men's Christian Association of the College is about a year old now, and has, with the Young Women's Christian Association, which was organized a little later, made encouraging progress. These Associations are wholly voluntary and aside from College curriculum. The meetings are held in the College building every Sunday afternoon, and are joint once a month. Bliss Freeman and Miss Hattie Hooker are the respective presidents of the Associations.

#### HOW TO WITHDRAW FROM THE COLLEGE.

If students have occasion to withdraw from the College, they should call on the President and make their arrangements with him. He will see that their accounts are properly adjusted, that proper records are made of their work, and that any money due from their credit deposit is refunded.

*Students who leave without having satisfactorily adjusted all these matters will not be entitled to an honorable dismissal.*

#### EXAMINATION AND STANDING.

Examinations are held at the end of each term. In order to pass, students must make a grade of 70 per cent in each subject. Failing to make this grade, students must report for re-

examination on the day specified; failing then, they must take the subject with a subsequent class.

#### ATTENDANCE.

Students are expected to be punctual and regular in attendance. They will not be permitted to leave the College in term time without a leave of absence granted by the President or Faculty. Temporary leave of absence may be granted by the President.

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### MATERIAL EQUIPMENT.

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#### THE MAIN BUILDING.

The main building is a fine brick structure of two stories and basement. It is trimmed with stone and has a very heavy stone foundation. It is well built, nicely finished, and cost about \$25,000. It contains thirteen rooms, all of which are furnished and in constant use. The building is well supplied with gas and water. On the first floor are the library and President's office, as well as a number of recitation rooms. On the second floor, besides several class rooms, is McFie Hall, which is used for class exercises, lectures, and similar purposes, and will seat a large audience.

The library and reading room is large and conveniently furnished. The library contains about 4,000 bound volumes, and a very large number of pamphlets. These works include good dictionaries, encyclopædias, etc., and a considerable amount of general literature of the best class, in addition to the numerous scientific works used by the special departments.

The following periodicals are either on the desks of the reading room, or in the offices of the special departments, and are accessible to students:—

American Florist, American Agriculturist, American Chemical Journal Analyst, American Machinist, American Naturalist, Business, Bulletin Torrey Botanical Club, Botanical Gazette, Catholic World, Chemical News, Century, Cosmopolitan,

Canadian Entomologist, Cassier's Magazine, Engineering News, Entomological News, Educational Review, Erythea, Electrical World, Engineering and Mining Journal, Field and Farm (Denver), Forum, Foundry, Gardening, Harper's Weekly, Harper's Round Table, Harper's Monthly Magazine, Independent, Journal American Chemical Society, Journal London Chemical Society, Journal Association Engineering Societies, Journal of Education, Journal of New York Entomological Society, Kew Bulletin (Royal Gardens), Ladies' Home Journal (2 copies), Mathematical Gazette, McClure's Magazine, Mining and Scientific Press, North American Review, Outlook, Pacific Rural Press, Phonographic World, Psyche, Popular Astronomy, Public Opinion, Rural New Yorker, Review of Reviews, Scientific American, Scientific American Supplement, Science, Scribner's Magazine, Success, Transactions American Entomological Society, Werner's Voice Magazine, Youths' Companion, New York Herald, Kansas City Star.

The following newspapers are furnished gratuitously by the publishers:

The New Mexico Collegian (College Paper).

The Las Cruces Democrat.

The Rio Grande Republican.

The Dona Ana County Republican.

The Socorro Chieftain.

The Eddy Current.

The Roswell Register.

The Roswell Record.

The Farmington Times.

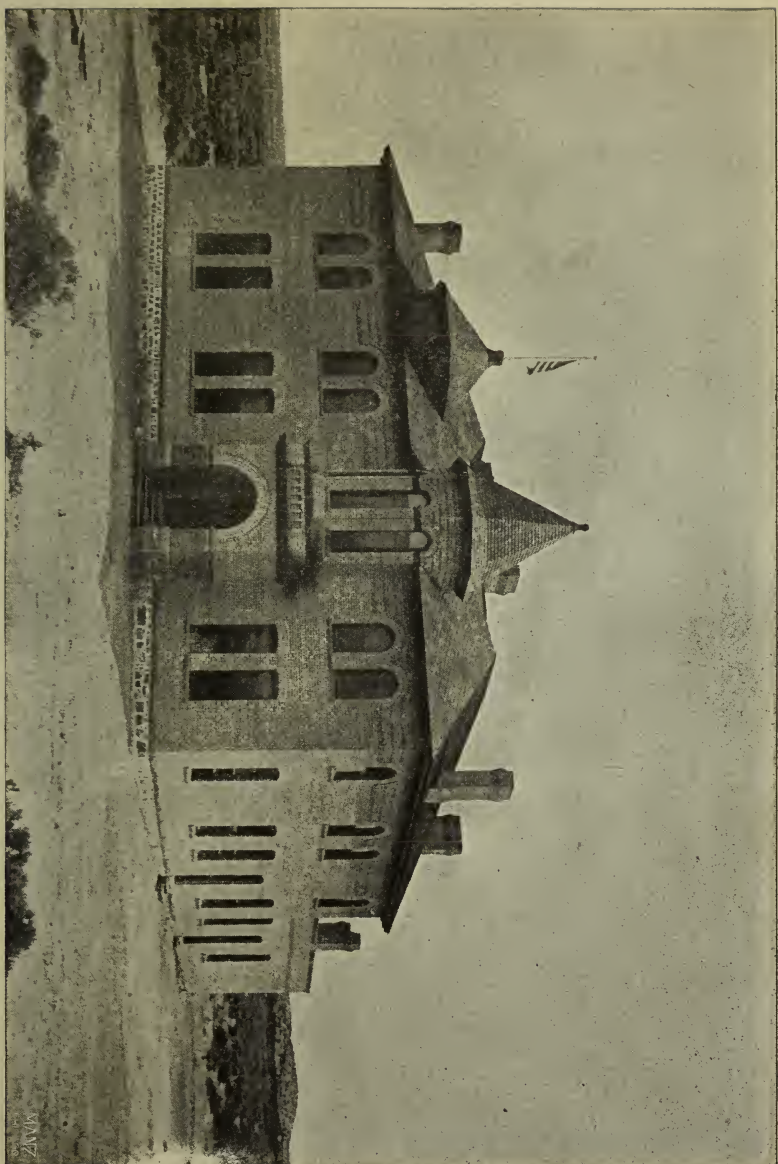
The New York Weekly Tribune.

The Baltimore Weekly Sun.

Students have access also to the numerous agricultural and horticultural papers which are kindly furnished by the publishers to the Experiment Station Library in exchange for the Station Bulletins.

#### SCIENCE HALL.

This is a large two-story brick building, situated to the north of the Main building. It contains eleven large rooms.



2447

SCIENCE HALL





A CORNER OF THE LIBRARY

and five smaller ones, besides large hall ways. The lower floor is used by the chemical department, while the upper is occupied by the departments of zoology, botany, entomology, and geology. The rooms are fitted up with new furniture specially adapted for their several purposes, and contain a large quantity of valuable apparatus belonging to the different departments. In this building the classes in zoological, geology, botany, chemistry, and assaying, are taught, and the station work in chemistry and biology is carried on.

#### ENGINEERING BUILDINGS.

These buildings, two in number, are located south of the Main building. They comprise, besides two large recitation rooms and hall, commodious rooms for wood work, machine work, foundry, blacksmithing, an electric light plant, and a 40 horse power steam plant. These buildings are well equipped for Engineering work.

#### GIRLS' DORMITORY.

This is a brick building, situated on the College Farm. It contains on the first floor a large dining hall, a reception room, kitchen, etc., and upstairs are eleven well lighted and ventilated sleeping rooms, all nicely furnished. About thirty can be accommodated in the building.

#### OTHER BUILDINGS.

Back of the Main building are the feed rooms and horse sheds. These are for the horses of the students and professors. The charge for their use is 25 cents a term, which is sufficient to keep them clean and in order:

Below the Main building is a pump house with engine and all other necessary machinery for pumping water from a system of six driven wells for the irrigation of the campus, which is much higher than the ditches which irrigate the farm land. This plant cost about \$2,500.

An adobe Farm building erected at a cost of about \$2,000 is located near the center of the farm. The Greenhouse and the sheds for the storing of farm implements and machinery, are located near the Farm building.



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### \* POLITICAL AND ECONOMIC SCIENCE.

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FREDERIC W. SANDERS, Professor.

*Political Economy.*—During the year 1899-1900 one course will be given in this subject, an exposition of the general principles of economics. Davenport's "Outlines of Economic Theory" will be the hand-book used, and the subject will be developed, in the main, by means of assigned readings and oral discussions. Collateral reading on special topics will be assigned to the several members of the class, upon which they will be required to report.

*Political Science.*—Two courses in political science will be given, in which the same general method will be followed as in the course in political economy: assigned readings, recitations and discussions, oral and written, by the class as a whole, and collateral reading and oral and written reports upon special topics by the members severally. In the first course, a comparative study of the development of government, Woodrow Wilson's "The State" will be used as a text-book. In the second course, constitutional law in the United States, Cooley's "General Principles of Constitutional Law" will probably be retained as a guide book.

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## ALUMNI.

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### OFFICERS OF THE ASSOCIATION.

President, Oscar C. Snow, '94.

First Vice-President, Alfred M. Holt, '96.

Second Vice-President, Fabian Garcia, '94.

Secretary, Joseph F. Bennett, '97.

Treasurer, Elgin B. Holt, '97.

Class of 1894.

Oscar C. Snow, B. S., Ranchman, Mesilla Park, N. M.

Fabian Garcia, B. S., Assistant in Agriculture, N. Mex.  
College of A. & M. Arts, Mesilla Park, N. M.

\*This outline of work came to hand too late for insertion among the other departments of instruction.

R. R. Larkin, B. S., Prin. Preparatory Dept., N. Mex. College of A. & M. Arts, Mesilla Park, N. M.

Lemuel C. McGrath, B. S., Merchant, Lordsburg, N. M.

Mrs. Guy Herbert (nee Williams), B. S., Housewife, Tulareosa, N. M.

Class of 1895.

Mrs. Clarence E. Rhodes (nee Casad), B. S., Housewife, El Oro, D. F., Mex.

Class of 1896.

Alfred M. Holt, M. S., Assistant Chemist, N. Mex. College of A. & M. Arts, Mesilla Park, N. M.

Mae Gilmore, B. S., Teacher, Alamogordo, N. M.

Albert H. Peterson, B. S., Draughtsman, Compañia Industrial Mexicana, Chihuahua, Mexico.

Clarence E. Rhodes, B. S., with American Mining Co., El Oro, D. F., Mexico.

Class of 1897.

Elgin B. Holt, B. S., Cattleman, Graham, N. M.

Arthur E. Williams, B. S., Business Mgr. "Sacramento Chief," Alamogordo, N. M.

Joseph F. Bennett, Jr., B. S., Instructor in Bookkeeping, N. Mex. College of A. & M. Arts, Mesilla Park, N. M.

Class of 1898.

Edwin E. Casey, B. S., U. S. V.—Deceased 1898.

Iva R. Mead, B. S., Prin. Las Cruces Public Schools, Las Cruces, N. M.

William A. Sutherland, B. S., Law Student, with S. B. Gillette, Albuquerque, N. M.

Duval G. Cravens, B. S., Assistant Engineering Dept. N. Mex. College of A. & M. A., Mesilla Park, N. M.

Isaac H. Stanley, B. S., Law Student, Silver City, N. M.

Charles E. Meade, B. S., Supt. Aztec Sub-station, Aztec, N. M.

George M. Williams, B. S., Student, Leland Stanford Junior University, Palo Alto, Cal.

Lottie Sweet, B. S., Student, Central College, Lexington, Mo.

## COLLEGE STUDENTS.

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### GRADUATES.

Bennett, Joseph Francis, Jr., B. S.,.... Mesilla Park.  
Cravens, Du Val Garland, B. S.,.. Fort Smith, Ark.  
Parrott, Percy John, B. S.,..... Lawrence, Kan.

### SENIORS.

Coe, Edward James,.....Fort Stanton.  
Holt, Walter Edwin,.....Las Cruces.  
Tinsley, John Dabney,.....Mesilla Park.

### JUNIORS.

Meeker, William Cory,.....Clifton, Ariz.  
Post, Charles L.,.....Mesilla Park.

### SOPHOMORES.

Coleman, Elizabeth,.....Mesilla Park.  
Davis, Vivette,.....El Paso, Tex.  
French, Fannie,.....Las Cruces.  
Hubbard, Harry Jenkins,.....Clint, Tex.  
Macgregor, James Stanislaus,.....Mesilla Park.  
McFie, Maud Eliza,\*.....Santa Fe.  
Newberry, Minnie W.,.....Mesilla Park.  
Newberry, Nora,.....Mesilla Park.  
Sanchez, Alfredo M.,.....Mesilla.  
Steel, Matthew,.....Las Cruces.  
Thompson, Cayetano,.....Georgetown.  
Wallace, Lunah Ward,.....Alamogordo.  
Wickham, Mary C.....Socorro.

### FRESHMEN.

Freeman, Bliss,.....Anthony.

\* Conditioned.

Knouse, Hattie Mabel,.....	Tularosa.
Loomis, Ralph W.,.....	El Paso, Tex.
May, Ormeda,.....	Las Cruces.
McCoach, Minerva Mae,.....	San Marcial.
Mott, Rowena,.....	Las Cruces.
Stephens, Bert,.....	Pomeroy, Wash.
Stinnett, Russell Tamah,.....	Bells, Va.

## SUB-FRESHMAN CLASS.

Ames, Henry P.,.....	Las Cruces.
Baird, Wallace W.,.....	Las Cruces.
Coleman, Ruth,.....	Mesilla Park.
Carrera, Regina,.....	Las Cruces.
Danburg, Walter M.,.....	Las Cruces.
Ford, Fannie,.....	Las Cruces.
Foster, Florence,.....	Las Cruces.
Freeman, Annie May,.....	Anthony.
Hooker, Hattie,.....	Silver City.
Isaacks, Mamie Caledonia,.....	Las Cruces.
Kremis, Edith Josephine,.....	San Marcial.
Lowe, Lawson David,.....	Las Cruces.
Luchini, Benjamine A.,.....	Hatch.
Metcalf, Robert James,.....	Silver City.
Metcalf, Orrick Baylor,.....	Silver City.
Mead, Victor V.,.....	Mesilla Park.
Nabours, Benjamine F.,.....	White Oaks.
Poe, Oscar L.,.....	Mesilla Park.
Scoggins, Mattie Ona,.....	Las Cruces.
Snow, Carl,.....	Victoria.
Trujillo, Villialdo G.,.....	Fairview.

## SPECIAL STUDENTS.

Bailey, Tудie,.....	Mesilla.
Baird, Nancy Cecilia,.....	Las Cruces.
Barber, Charles Melvin,.....	La Porte, Ind.
Brannigan, Ella May,.....	Sharon Creek, Ohio.
Ford, Pinkie,.....	Las Cruces.

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Llewellyn, Morgan, .....	Las Cruces.
Macgregor, Marie Justina, .....	Mesilla Park.
Metcalfe, Mary T., .....	Silver City.
Newberry, Lillie Maud, .....	Mesilla Park.
Peet, Ethel N., .....	Monticello, Ind.
Sweet, Alma, .....	Mesilla Park.
Winter, Edward Ernest, .....	El Paso, Tex.
Tafoya, Teofilo, .....	Las Cruces.

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### BUSINESS STUDENTS.

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#### STENOGRAPHY AND TYPEWRITING.

Bryan, Joseph M., .....	Las Cruces.
Etheridge, Ollie, .....	Montell, Tex.
Etheridge, Annie L., .....	Clint, Tex.
* Etheridge, Ralph Waldo Emerson, .....	Clint, Tex.
Ford, Pinkie, .....	Las Cruces.
Gonzales, Pablo, .....	Las Cruces.
Greenwald, Joseph E., .....	Socorro.
Jutten, Llewellyn W., .....	Fall River, Mass.
Roualt, Jr., Theodore, .....	Las Cruces.

#### BOOKKEEPING.

Bean, Albert S., .....	Van Horn, Tex.
Clark, Frank P., .....	El Paso, Tex.
Codlin, Fred, .....	Springer.
Corbett, Bert, .....	Springer.
Elam, Robert C., .....	Clint, Tex.
Espy, Joe, .....	Van Horn, Tex.
Etheridge, R. W. E., .....	Clint, Tex.
Gooch, L. C., .....	O. K., Ky.
Greenwald, Jos. E., .....	Socorro.

\* Left before close of the year to accept position.

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Hegan, Maggie,.....	Organ.
Helm, Zell,.....	El Paso, Tex.
Keezer, Avery,.....	Las Cruces.
Keezer, Roy V.,.....	Las Cruces.
McLachlen, Malcomb,.....	El Paso, Tex.
Mossman, Walter C.,.....	Mesilla Park.
Reid, Rufus,.....	San Antonio.
Reush, Guy F., .....	Earlham.
Lewis, Stanley,.....	Van Horn, Tex.
Talle, Otie A., .....	Springer.

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### PREPARATORY STUDENTS.

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#### A CLASS.

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Breece, Florence,.....	Mesilla Park.
Breece, Clara Olivia,.....	Mesilla Park.
Casey, Clara Lillice, .....	Las Cruces.
Chase, Mae Bell, .....	Chicago, Ill.
Ford, Annice, .....	Las Cruces.
Fielder, Herbert Austin, .....	Silver City.
Goodin, Burr, .....	Mesilla Park.
Garrett, Dudley Poe,.....	Las Cruces.
Isaacks, Willie Fredrick, .....	Las Cruces.
Llewellyn, Gladys,.....	Las Cruces.
Llewellyn, Frances, .....	Las Cruces.
Lee, Donnie, .....	Las Cruces.
Mead, Herbert Henry,.....	Mesilla Park.
Mordy, Grace McLean, .....	Mesilla Park.
Mordy, Josephine Gardner, .....	Mesilla Park.
Newman, Robt. E. L., .....	El Paso, Tex.
Newcomb, Bessie Read, .....	Las Cruces.
Newberry, Henry Clay, .....	Las Cruces.



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Neal, Homer H., .....	Mesilla Park.
Newton, Cornelius, .....	Earlham.
Olinger, Robert, .....	Las Cruces.
Quintero, Jose, .....	Mesilla.
Ramirez, Rafael, .....	Mesilla.
Rouault, Ernest, .....	Las Cruces.
Schenk, James Joseph, .....	Las Cruces.
Soto, Carlos M., .....	Las Cruces.
Smith, Mary Marian, ....	San Louis Potosi, Mex.
Sperling, Florence Elizabeth, .....	Socorro.

## B CLASS.

Ascarate, Nemecia V., .....	Las Cruces.
Bogardus, Park Edmund, .....	Las Cruces.
Bull, Charlie H., .....	Mesilla.
Breece, Lulu Mae, .....	Mesilla Park.
Breece, Lewis, .....	Mesilla Park.
Chavez, Manuel R., .....	Mesilla.
Clark, Phillip D., .....	El Paso, Tex.
Freitze, George, .....	Mesilla.
Falomir, Ponciano, .....	Chihuahua, Mex.
Goodin, Frank, .....	White Oaks.
Gatlin, James E., .....	Frisco.
Hostetter, Cecil P., .....	Las Cruces.
Hostetter, Hazel H., .....	Las Cruces.
Hammond, Laura Virginia, .....	Lazerville. W. V.
Isaacks, Nancy Coila, .....	Las Cruces.
Kennedy, John William, .....	Las Cruces.
Lapoint, William P., .....	Las Cruces.
Lowe, Joseph, .....	Las Cruces.
Marrufo, Dolores, .....	Las Cruces.
Mead, Anita Limerick, .....	Mesilla Park.
Nabours, Bessie L., .....	White Oaks.
Newcomb, Bessie, .....	Las Cruces.
Ochoa, Jesus, .....	Mesilla.
Reush, Claude, .....	Earlham.

Schenk, August, .....	Las Cruces.
Scoggins, Beulah, .....	Las Cruces.
Schenk, George L., .....	Las Cruces.
Van Lindt, Georgia, .....	Mesilla Park.
Williams, Alfred Stanley, .....	El Paso, Tex.
Williams, Samuel H., .....	Tularosa.
Williams, Willis Waugh, .....	Tularosa.
Wakefield, Rowland R., .....	Anthony.

C CLASS.

Andres, Vincent B., .....	El Paso, Tex.
Breece, Lawrence, W., .....	Mesilla Park.
Carrera, Linda, .....	Las Cruces.
Dessaur, Phillip Edward, .....	Las Cruces.
Llewellyn, Ida May, .....	Las Cruces.
Lohman, Eugene, .....	Las Cruces.
Lucero, Juan, .....	Las Cruces.
Ramirez, Thomas, .....	El Paso, Tex.
Sweet, Jacob Allen, .....	Mesilla Park.

D CLASS.

Armijo, Josephine, .....	Las Cruces.
Buntz, Frank, .....	Las Cruces.
Buntz, Charlie, .....	Las Cruces.
Carrier, Jose M., .....	Las Cruces.
Coleman, Dan. R., .....	Mesilla Park.
Foster, Ethel, .....	Las Cruces.
Falomir, Ysabel, .....	Chihuahua, Mex.
Ford, Alice Bessie, .....	Las Cruces.
Ford, Lela Ray, .....	Las Cruces.
Goodin, Browne, .....	Mesilla Park.
Heradia, Concepcion, .....	City of Mexico, Mex.
Hatton, Thurman, .....	Las Cruces.
Jackson, Willie, .....	Las Cruces.
Mossman, Willie Gertrude, .....	Las Cruces.
Mordy, Jessie, .....	Mesilla Park.
Nabours, Myrtle, .....	White Oaks.

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Patteson, Jamie,.....	Las Cruces.
Patteson, Mark,.....	Las Cruces.
Patton Jno. F.,.....	Las Cruces.
Poe, James Ralph,.....	Mesilla Park,
Steel, James Alexander, .....	Las Cruces.
Van Lindt, Cherry, .....	Mesilla Park.
White, Joe Russell,.....	Las Cruces.
Winter, Wm. Pelham,.....	El Paso, Tex.

## SPECIAL CLASS.

Archuleta, Ysabel,.....	Las Cruces.
Ascarate, Mariano,.....	Janos, Chih., Mex.
Booth, William Lawrence,.....	El Paso, Tex.
Beasley, Austin,.....	Las Cruces.
Boisselier, Carlos C.,.....	Juarez, Mex.
Carrera, Emile,.....	Las Cruces.
Carbajal, Anastacio,.....	Ysleta, Tex.
Chavez, Epifanio, .....	Las Cruces.
De la Peña, Jose M.,.....	Sta. Rosalia, Mex.
Delgado, Jose.....	Chihuahua, Mex.
Enciniaz, Leopoldo, .....	Garfield.
Falomir, Manuel,.....	Chihuahua, Mex.
Falomir, Julio, .....	Chihuahua, Mex.
Fountain Jr., Albert J.,.....	Mesilla.
Flores, Vicente, .....	Jaurez, Mex.
Gonzales, Jesus,.....	Tortugas.
Guerra, Juan,.....	Mesilla.
Lucero, Andreas,.....	Mesilla.
Lucero, Guadalupe, .....	Chihuahua, Mex.
Lucero, Francisco,.....	Las Cruces.
Molinar, Rafael,.....	Chihuahua, Mex.
Mason, Fanny,.....	Mesilla.
Maynez, Guadalupe,.....	Chihuahua, Mex.
Marquez, Manuel,.....	Las Cruces.
Reush, Bernie C.,.....	Earlham.
Romero, Baltazar,.....	Chihuahua, Mex.
Sampson, Irving,.....	Las Cruces.

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Shields, Leslie Bell,.....	Las Cruces.
Silva, Manuel,.....	Hatch.
Stephenson, Louis,.....	Janos, Chih., Mex.
Quintero, Fernando,.....	Mesilla.
Van Lindt, Elmer,.....	Mesilla Park.

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### SUMMARY.

Graduates.....	3
Seniors .....	3
Juniors.....	2
Sophomores.....	13
Freshmen .....	8
Sub-Freshmen .....	21
Special Students.....	13
Stenography and Typewriting...	9
Bookkeeping.....	19
Preparatory .....	125
	<hr/>
	216
Names repeated.....	4
	<hr/>
Total number of students.....	212

# THE AGRICULTURAL EXPERIMENT STATION.

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## BOARD OF CONTROL:

### BOARD OF REGENTS OF THE COLLEGE.

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H. D. BOWMAN, Las Cruces, President.

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MANUEL C. DE BACA, Superintendent of Public Instruction,  
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### STATION STAFF - 1899-'00.

FREDERIC W. SANDERS, Ph.D., Director.

ARTHUR GOSS, M. S., A. C., Chemist and Vice Director.

T. D. A. COCKERELL, Entomologist.

E. O. WOOTON, A. M., Botanist.

JOHN D. TINSLEY, Zoologist.

CHARLES A. KEFFER, Agriculturist and Horticulturist.

R. FRED HARE, M. S., Assistant Chemist.

FABIAN GARCIA, B. S., Assistant Agriculturist.

ALFRED M. HOLT, M. S., Second Assistant Chemist.

HUMBOLDT CASAD, Assistant Horticulturist.

FRANK E. LESTER, Clerk.

CHARLES E. MEAD, B. S., Superintendent of San Juan  
Branch Experiment Station, Aztec.

JOHN S. THORNHILL, Superintendent of Las Vegas Branch  
Experiment Station, Las Vegas.

## COLLEGE EXPERIMENT STATION.

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By the Congressional Act of 1887, the Hatch Act, (see page 10) a "Department" of Agricultural Colleges was endowed, having for its purpose the performing of experiments of value to Agriculture and Horticulture and the diffusing of valuable information among the people. The Territorial Act of February 28, 1889, which established the New Mexico College of Agriculture and Mechanic Arts, established also an Experiment Station in connection with the College. This department is in successful operation.

The College Farm, which was donated to the Territory by the citizens of Doña Ana County, contains about 250 acres. Nearly 100 acres of this farm is good river bottom land, supplied with water from the Las Cruces Community ditch, which crosses it. The leading experiments at present being conducted on the College Farm have for their object the determination of irrigation problems: the actual amount of water used under ordinary methods of farming, the amount of water necessary to the production of crops, how far cultivation may be made to serve in the saving of moisture to the soil, etc. Experiments in orchard management and extensive tests of grasses and forage crops are being made.

In addition to the work of the Agricultural section, the departments of Chemistry, Botany, and Entomology are employed in solving problems of practical interest to the New Mexico farmer and fruit grower.

The following Bulletins have been issued from the Experiment Station and, with the exception of those marked with



an asterisk, will be sent free of charge to all persons in New Mexico who apply for them:—

\* No. 1, April, 1890—General Information.

\* No. 2, October, 1890—Outline of Plans of Experimentation.

No. 3, June, 1891—Preliminary Account of Some Insects Injurious to Fruit.—C. H. Tyler Townsend.

No. 4, March, 1892—Fruit Trees, Forest and Shade Trees, Nut-bearing Trees, and Vegetables—A. E. Blount.

No. 5, March, 1892—Notices of Importance Concerning Fruit Insects.—C. H. Tyler Townsend.

No. 6, March, 1892—Cereals, Forage Plants, Grasses, Clovers, Textile Plants, and Sorghums.—A. E. Blount.

No. 7, June, 1892—Scale-insects in New Mexico.—C. H. Tyler Townsend.

\* No. 8, November, 1892—Wheat, Oats, Barley, Rye, Sugar Beets, Sorghum, Canaigre, etc.—A. E. Blount.

No. 9, May, 1893—Insectides and their Appliances.—C. H. Tyler Townsend.

No. 10, September, 1893—Insects of 1893.—T. D. A. Cockerell.

\* No. 11, October, 1893—Notes on Canaigre and Meteorological Data.—A. E. Blount and Harvey H. Griffin.

No. 12, November, 1893—The Value of Rio Grande Water for the Purpose of Irrigation.—Arthur Goss.

No. 13, New Mexico Weeds. No. 1.—E. O. Wooton.

No. 14, Canaigre.—A. E. Blount.

No. 15, Entomological Observations in 1894: Life Zones in New Mexico: Entomological Diary at Santa Fe.—T. D. A. Cockerell.

No. 16, September, 1895—The Russian Thistle.—E. O. Wooton.

No. 17, December, 1895—Principles of Stock Feeding and Some New Mexico Feeding Stuffs.—Arthur Goss.

No. 18, March, 1896—Some New Mexico Forage Plants.—E. O. Wooton.

No. 19, April, 1896—Report of the Entomologist, (Part I.)  
T. D. A. Cockerell.

No. 20, December, 1896.—Seeds.—George Vestal.

No. 21, January, 1897—Results of Experiments at San Juan  
Sub-Station.—H. H. Griffin.

No. 22, March, 1897—Alkali in the Rio Grande and Animas  
Valleys.—Arthur Goss and H. H. Griffin.

No. 23, April, 1897—Sugar Beets.—Cornelius T. Jordan.

\* No. 24, August, 1897.—Life-Zones in New Mexico.—T.  
D. A. Cockerell.

No. 25, February, 1898—Preliminary Notes on the Codling  
Moth.—T. D. A. Cockerell.

No. 26, June, 1898—New Mexico Sugar Beets.—Arthur  
Goss.

No. 27, June, 1898—Report on Plums—Geo. Vestal and  
Fabian Garcia.

No. 28, December, 1898—Life Zones in New Mexico, No. 2.  
T. D. A. Cockerell.

Branch experiment stations are located at Roswell, Chaves  
County; Las Vegas, San Miguel County; and Aztec, San Juan  
County. These experiment farms were donated by the citizens  
of their respective localities to the Territory. During the last  
session of the legislature provision was made for their support,  
and it is confidently expected that they will prove of great use-  
fulness to the localities in which they are situated.

\*The edition of these Bulletins is exhausted.

*PROGRAM—First Term.*

TIME.	SUB-FRESHMAN.	FRESHMAN.	SOPHOMORE.	JUNIOR.	SENIOR.
8:30	Literary Reading and Composition.	English.	Trigonometry.	Elementary Mechanics, Agriculture.	
9:30	Physics (Mon., Wed., Fri.) Agriculture (Tues., Thurs.)		Elocution (4).	Analytic Geometry (4). Spanish (4). English Literature (4). English (Mon.)	Hydraulics. Psychology (4).
10:30		Spanish. Latin.	Physics.		Steam Boilers (4).
11:30	Free-hand Drawing (4) Domestic Economy (Mon)	Geometry.	Spanish.	Chemistry.	Mineralogy.
1:15	Carpentry (Fri.)	Domestic Economy. Mechanical Drawing (Mon., Wed.) Bench Work in Wood, (Tues., Thurs.)	Pattern Making (Mon., Wed.) Zoology (Mon., Wed.)	Elementary Psychology Latin. Machine Design (Tues., Thurs.) Machine Shop (Mon., Wed.)	Astronomy. Designing (Tues., Thurs.) Machine Shop (Mon., Wed.)
2:15	General History (4). Carpentry (Fri.) Domestic Economy (Fri.)	Floriculture. Mechanical Drawing, (Mon., Wed.) Bench Work in Wood, (Tues., Thurs.)	Pattern Making (Mon., Wed.) Zoology (Mon., Wed.) English (Thurs.)	Botany. Machine Design (Tues., Thurs.) Machine Shop (Mon., Wed.)	Designing (Tues., Thurs.) Machine Shop (Mon., Wed.) English (Fri.)
3:15	Algebra (4).	Bench Work in Wood, (Tues., Thurs.)	Pattern Making (Mon., Wed.)	Physiology. Machine Shop (Mon., Wed.)	Machine Shop (Mon., Wed.)

NOTE.—Classes meet five times per week unless otherwise stated.

PROGRAM—Second Term.

TIME.	SUB-FRESHMAN.	FRESHMAN.	SOPHOMORE.	JUNIOR.	SENIOR.
8:30	Literary Reading and Composition.	English.		Mechanism (4).	Geology (4).
9:30	Botany (4). Domestic Economy (Mon.)		Political Science. Descriptive Geometry. Pedagogy.	Calculus. Spanish. English Literature.	Metallurgy (4).
10:30		Spanish. Latin.	Physics (4).		Steam Engine. Agriculture.
11:30	Physics (Mon., Wed., Fri.) Agriculture (Tues., Thurs.)	Geometry.	Spanish.	Chemistry.	Political Economy. Psychology (4).
1:15	Carpentry (Fri.) Domestic Economy (Fri.)	Wood Turning, (Mon., Wed.) Chemistry, (Tues., Thurs., Fri.)	Surveying (Mon., Wed.) Physical Culture (Mon., Wed.) Mechanical Drawing (Tues., Thurs.) Zoology (Tues., Thurs.) English (Fri.)	Machine Shop (Mon., Wed.) Machine Design (Tues.) Pedagogy (4) Entomology (4) English (Mon.) Latin.	Astronomy (4). Engine and Boiler Tests (Mon., Wed.) Roofs and Bridges (Tues., Thurs.)
2:15	Carpentry, (Fri.) General History (4).	Wood Turning, (Mon., Wed.) Horticulture.	Surveying (Mon., Wed.) Mechanical Drawing (Tues., Thurs.) Zoology (Tues., Thurs.)	Machine Shop (Mon., Wed.) Machine Design (Tues.) Botany (4). Elocution (Fri.)	Engine and Boiler Tests (Mon., Wed.) Roofs and Bridges (Tues., Thurs.) English (Fri.)
3:15	Algebra (4).	Wood Turning, (Mon., Wed.)	Surveying (Mon., Wed.) Physical Culture, (Tues., Thurs.)	Machine Shop (Mon., Wed.) Botany (4).	Engine and Boiler Tests (Mon., Wed.)

NOTE.—Classes meet five times per week unless otherwise stated.

## PROGRAM—Third Term.

TIME.	SUB-FRESHMAN.	FRESHMAN.	SOPHOMORE.	JUNIOR.	SENIOR.
8:30	Literary Reading and Composition.	English.	Horticulture. Analytic Geometry (3). Higher Algebra (2).	Botany.	Engineering Structures Philosophy of Education
9:30		Agriculture (4).	History of Education.	Calculus. Spanish. English Literature.	Electrical Engineering. Geology.
10:30	Botany (Mon., Wed., Fri.) Horticulture (Tues., Thurs.)	Geometry.	Spanish.	Entomology (4). Pedagogy (4). Strength of Materials (4). Constitutional Law (4). English (Fri.)	
11:30	Free-hand Drawing (4) Domestic Economy (Mon.)	Spanish. Latin.	Physics.	Theory of Horticulture. Analytical Mechanics.	History of Civilization.
1:15	Carpentry (Fri.) Domestic Economy (Fri.)	Domestic Economy. Iron and Steel Forging (Mon., Wed.) Mechanical Drawing (Tues., Thurs.)	Pedagogy (4). Commercial Law (4). Pattern Making (Mon., Wed.) Mechanical Drawing (Tues., Thurs.) English (Fri.)	Chemical Laboratory (4).	English (Mon., Tues., Thurs.) Elocution (Wed., Fri.)
2:15	Carpentry (Fri.) General History (4).	Floriculture. Iron and Steel Forging (Mon., Wed.) Machine Design (Tues., Thurs.)	Pattern Making (Mon., Wed.) Mechanical Drawing (Tues., Thurs.) Zoology (Mon., Wed.)	Chemical Laboratory (4). Latin.	Astronomy (Fri.) Theses (4).
3:15	Algebra (4)	Iron and Steel Forging (Mon., Wed.)	Pattern Making (Mon., Wed.) Zoology $\frac{1}{2}$ hr (Mon., Wed.)	Chemical Laboratory $\frac{1}{2}$ hr. (4).	Theses (4).

NOTE.—Classes meet five times per week unless otherwise stated.











3aH  
1900

THE LIBRARY  
OF THE  
UNIVERSITY OF ILLINOIS

RECEIVED  
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Tenth  
Annual  
Register

New Mexico College  
of  
Agriculture and Mechanic Arts  
Mesilla Park

Catalogue of Students for 1899-1900  
and  
Announcement for 1900-1901

Printed by  
Donna Ana County Republic  
Las Cruces, N. M.  
1900

Tenth Annual Register

New Mexico College

of

Agriculture and Mechanic Arts

Mesilla Park

Catalogue of Students for 1899-1900

and

Announcement for 1900-1901





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## Calendar for 1900-1901

September	3 and 4, 1900,	Examination of Candidates for Admission and re-examination of deficient students.
"	3, 4, 5, 1900,	Marticulation of Students.
"	5 and 6, 1900,	Assignment of students to classes and assignment of work by class instructors.
"	7, 1900,	Regular class work of 1st term begins.
November	23, 1900,	Recitations of 1st term end.
"	26, "	A. M. Examination of classes held first period of the day.
"	" " P. M.	" " " " 2nd " " " "
"	27, " A. M.	" " " " 3rd " " " "
"	" " P. M.	" " " " 4th " " " "
"	28, " A. M.	" " " " 5th " " " "
"	" " P. M.	" " " " 6th " " " Mon-
		days, Wednesdays and Fridays.
"	29, 1900,	Thanksgiving holiday.
"	30, 1900,	A. M. Examination of classes held 6th period of Tuesdays and Thursdays.
"	" " P. M.	Examination of classes not otherwise provided for.
December	3, "	Assignment of students to classes for second term and assignment of work by class instructors.
"	4, "	Regular class work for second term begins.
"	22, "	Christmas vacation begins.
January	6, 1901,	" " ends.
February	22, "	Washington's Birthday—holiday.
March	1, "	Recitations of 2nd term end.
"	4-7, "	Examinations for 2nd term (arranged as at end of 1st term)
"	11, 1901,	Assignment of students to class for 3rd term and assignment of work by class instructors.
"	12, 1901,	Regular class work for third term begins.
May	3, 1901,	Field Day.
"	24, "	Recitations for third term end.
"	27-29, 31, 1901,	Examinations of third term's work, and examinations for admission to College; Senior vacation.
"	30, 1901,	Memorial Day—holiday.
June	2, 1901,	Baccalaureate Sermon.
"	3, 1901,	P. M., Address to Columbian Literary Society.
"	4, 1901,	Alumni meeting.
"	5, 1901,	Commencement Exercises.

## Board of Regents

L. Bradford Prince, LL.D., President, Santa Fe, N. M.  
P. H. Curran, Secretary and Treasurer, Las Cruces, N. M.  
Granville A. Richardson, Roswell, N. M.  
A. A. Jones, Las Vegas, N. M.  
Prisciliano Moreno, Las Cruces, N. M.

## Advisory Members

Hon. Miguel A. Otero, Governor of New Mexico, Santa Fe,  
N. N.  
Hon. Manuel C. De Baca, Supt. of Pub. Instruction, Santa Fe,  
N. M.

# Faculty

FREDERIC W. SANDERS, Ph.D., President and Professor of Political and Economic Science.

A. B., College of the City of New York, 1883; A. M., Harvard University, 1892; Ph.D., University of Chicago, 1895. Private teaching, business and governmental service, editorial work, and study of law, 1883-87; Counselor at Law, New York, 1887; Law Practice in New York and Tennessee, 1887-91; graduate student, Harvard University, 1891-92; ministerial work, 1892-93; graduate student at University of Chicago and assistant editor of "Unity", 1893-95; University Fellow in Sociology, Columbia University, 1895-96; University Extension Lecturer in Sociology and Pedagogy, University of Chicago, 1896-97; Lecturer-elect in Statistics and Social Economics in graduate school of University of Chicago, 1897; Assistant Professor of Pedagogy, West Virginia University, 1897; Assistant Professor of European History, *ibid.*, 1897—April, 1899; Professor of European History, *ibid.*, April, 1899—October, 1899; President and Professor of Political and Economic Science in New Mexico College of Agriculture and Mechanic Arts and Director of New Mexico Agricultural Experiment Station, since 1899.

CLARENCE T. HAGERTY, M. S., Professor of Mathematics and Astronomy.

B. S., Notre Dame University, 1890; M. S., *ibid.*, 1895. Summer Terms 1881 and 1885, Northern Indiana Normal School and Business Institute, Valparaiso, Ind.; course in civil engineering, Harvard University, summer term, 1891. Associate Professor of Mathematics, New Mexico College of Agriculture and Mechanic Arts, 1891; Professor of Mathematics, *ibid.*, 1892; Professor of Mathematics and Astronomy, *ibid.*, since 1898.

ARTHUR GOSS, M. S., A. C., Professor of Chemistry.

B. S., Purdue University, 1888; A. C., *ibid.*, 1889; M. S., *ibid.*, 1895. Assistant to Indiana State Chemist, 1888-1892; Assistant Chemist, Indiana Experiment Station 1888-1892; Assistant to Director Indiana Weather Service, 1889-1892; Reporter on Soils and Ash, Association of Official Agricultural Chemists, 1893 and 97; Member of Executive Committee, A. O. A. C., 1897 and 1900; Professor of Chemistry, New Mexico College of Agriculture and Mechanic Arts, and Chemist of the Agricultural Experiment Station, since 1892; Vice Director, New Mexico Agricultural Experiment Station, since 1895.

FRANK W. BRADY, M. E., Professor of Mechanical Engineering and Superintendent of Buildings.

B. M. E., Purdue University, 1888; M. E., *ibid.*, 1894; member of the American Institute of Electrical Engineers. Constructive Engineer, Sprague Electrical Equipment Co., 1888; graduate student and Assistant in Mechanic Arts Department, Purdue University, 1888-89; Construction Engineer, Sprague, Edison and General Electric Cos., 1889-91; graduate student and Assistant in Electrical Engineering Department, Purdue University, 1893-94; General Engineering practice, 1891-95; present position since 1895.

\*T. D. A. COCKERELL, Professor of Entomology.

Educated at private schools in England and at the Middlesex Hospital (London) Medical-School (1883-86); student at the British Museum, 1890-91; Curator of Museum, Institute of Jamaica, 1891-93; Entomologist New Mexico Agricultural Exper. Station, 1893; Professor of Entomology and Zoology, New Mexico College of Agriculture and Mechanic Arts, 1893-96; Professor of Entomology, *ibid.*, 1898-1900.

HIRAM HADLEY, A. M., Professor of History and Philosophy.

Student at Friends' Boarding School (now Earlham College) and Haverford College 1851-54; A. M. (honorary), Earlham College, 1885. Principal Friends' Academy, Carthage, Indiana, 1854-56; Principal Friends' Academy, Richmond, Indiana, 1856-63; also County Superintendent Public Schools, Wayne County, Indiana, (about) 1861-63; Western Manager Educational Department of Charles Scribner & Co., 1863-65; organized and conducted Hadley's Normal Academy, Richmond, Indiana, 1865-68; Western Manager of Educational Department of Scribner, Armstrong & Co., and member of the firm of Hadley Brothers, Publishers and Booksellers, Chicago, 1868-1877; representative of School Books of D. Appleton & Co., 1878-1880; organized and conducted Hadley's Classical Academy, Indianapolis, 1880-83; Principal Friends' Academy, Bloomington, Indiana, 1885-87; President Las Cruces College, N. M., 1888-1890; President New Mexico College of Agriculture and Mechanic Arts, 1890-94; Acting President of the University of New Mexico, 1894-97; present position since 1898.

ELMER OTTIS WOOTON, A. M., Professor of Biology, and in charge of Geology and Physics.

B. S., Earlham College (Richmond, Ind.), 1889; A. M., *ibid.*, 1896. Professor of Chemistry and Botany in the College, and Chemist and Botanist in the Experiment Station, N. M. College of Agr. and Mech. Arts, 1892; student summer school of Harvard University, 1891; Professor of Botany and in charge of Geology and Physics in the College, and Botanist in the Experiment Station, N. M. College of Agr. and Mech. Arts, 1892-96; graduate student, Columbia University, 1896-98; Professor of Botany, etc., and Botanist in the Experiment Station, since 1898; Professor of Biology, 1900.

FREDERICK F. BARKER, LL.B., Professor of Rhetoric and Literature.

Student in France and Germany, 1881-84; LL. B., Cambridge University (England), 1891. Instructor in charge of Latin, Greek, and Spanish, N. M. College of Agr. and Mech. Arts, 1892-94; Student and business man in Mexico, 1894-98; Professor of English and Latin, N. M. College of Agr. and Mech. Arts, 1898-1900; Professor of Rhetoric and Literature, *ibid.*, 1900.

JOHN DABNEY TINSLEY, B. S., Professor of Soil Physics.

Graduate Miller Manual Labor School, Va., 1888; student at University of Virginia, 1888-91; B. S., New Mexico College of Agr. and Mech. Arts, 1899. Teacher Natural Sciences in Miller Manual Labor School, 1891-96; Professor of Biology and Station Biologist, New Mexico College of Agr. and Mech. Arts. and Agr. Exp. Station, 1896-98; in charge Soil and Irrigation Investigations of this Exp.

\*Resigned.



Station, 1898-99; Professor of Zoology in N. M. College of Agr. and Mech. Arts, 1899-1900, and Soil Physicist and Meteorologist of N. M. Agr. Exp. Station, since 1899; Professor Soil Physics, *ibid.*, 1900.

**ALICE HORNING, B. S.,** Professor of Domestic Economy, Dean of Women, and Matron of the Women's Hall.

B. S., Agricultural College of Oregon, 1882. Assistant in the Public Schools of Corvallis, Oregon, 1892-93, 1894-97; graduated from a two years' course in Domestic Economy at Drexel Institute, Philadelphia, 1899; Teacher of Invalid Cookery and Dietetics in the Alleghany General Hospital, Alleghany, Pa., Feb. 1st, 1899, to August 1st, 1899; Instructor in Domestic Economy in New Mexico College of Agriculture and Mechanic Arts and Matron of Women's Hall; Sept. 1899; Associate Professor of Domestic Economy and Dean of Women, *ibid.*, October, 1899; Professor of Domestic Economy, *ibid.*, 1900.

**JOHN J. VERNON, B. S. AGR.,** Professor of Agriculture and Horticulture and Superintendent of Grounds.

B. S. Agr., Iowa State College, 1897. Assistant in Horticulture, *ibid.*, 1897-1900; Professor of Agriculture and Horticulture, N. M. College of Agr. and Mech. Arts, and Agriculturist of the N. M. Exp. Station, 1900.

**W. M. REED, C. E.,** Professor of Civil and Irrigation Engineering.

Graduate of Sherman Collegiate Institute; C. E., University of Vermont. Assistant in United States C. & G. S., Department of Green Mountains, 1885; Division Engineer, Canadian Atlantic Railway, 1886; Assistant Engineer, Colorado Midland Railroad, 1887-1888; Assistant Engineer, Pecos Irrigation and Improvement Co., 1889-94; Engineer and Water Superintendent, Roswell Land and Water Co., 1894-98; Chief Engineer, Pecos Irrigation and Improvement Co., 1898-1900; Special Agent, U. S. Irrigation Investigations, 1899; Engineer of N. M. Territorial Irrigation Commission, 1900; Professor of Civil and Irrigation Engineering in the College and Irrigation Engineer of the Agricultural Experiment Station, N. M. College of Agr. and Mech. Arts, 1900.

**RALPH ROY LARKIN, B. S.,** Principal of the Preparatory Department.

B. S., New Mexico College of Agriculture and Mechanic Arts, 1894. Principal San Marcial (N. M.) Public School, 1894-95; Principal Wolsey (S. D.) Public Schools, 1895-98; State Institute Conductor for South Dakota, 1898; Principal Preparatory Department, New Mexico College of Agriculture and Mechanic Arts, since 1898.

**FRANCIS E. LESTER,** Registrar and Principal of the Department of Stenography.

Wigton School (England), 1879-1882; Ackworth School (Eng.), 1882-84; engaged in business (Eng.), 1884-89; Bryant and Stratton's Business College, 1890; Since 1891, Registrar (sub. nom. College Clerk, Secretary of Faculty, and Clerk of the Board of Regents), and since 1895 Instructor in Stenography and Typewriting.

ing, in the New Mexico College of Agriculture and Mechanic Arts; present position, 1900.

RALEIGH FREDERICK HARE, M. S., Assistant Professor of Chemistry.

B. S., Alabama Polytechnic Institute, 1892; M.S., *ibid.*, 1893. Scholarship and 3rd Assistant Chemist, *ibid.*, 1892-93; Assistant Chemist, New Mexico College of Agriculture and Mechanic Arts and Agricultural Experiment Station, 1893-96; Instructor in Chemistry and 1st Assistant Station Chemist, *ibid.*, 1896-1900; Assistant Professor of Chemistry and 1st Assistant Station Chemist, *ibid.*, 1900.

FABIAN GARCIA, B. S., Assistant Professor of Horticulture.

B. S., N. M. College of Agriculture and Mechanic Arts, 1894. Assistant in Agriculture and Horticulture, *ibid.*, and Assistant Agriculturist and Horticulturist, N. M. Agr. Exp. Station, 1894-1900; graduate student at Cornell University, 1899-1900; Assistant Professor of Horticulture in the College, and Horticulturist in the Experiment Station, 1900.

## Other Officers of Instruction

### CHARLES MILLS, Instructor in College Shops.

Apprenticeship at the pattern making trade, Danville F'dry and Mach. Works, 1877-80; Foreman Pattern Maker, Bridge Department, C. & E. I. R. R., 1880; Foreman Pattern Maker, Terra Haute Car and Mfg. Co., 1880-81; Journeyman, Buckeye Iron and Brass Works, student Night Drawing School, Dayton, O., 1881-83; Foreman pattern maker, Danville, Ill., 1885-89; Journeyman, Crane Co., Chicago, 1891; Draughtsman, foreman pattern maker, and in charge of field work, Danville Fdry. and Machine Co., 1891-93; Foreman of Wood Shop, New Mexico College of Agr. and Mech. Arts, and Student in Mech. Eng. course 1893-94; Foreman of Wood Shop and Foundry, and student in Mech. Eng. *ibid.*, 1894-95; present position since 1895.

### LAURA FRENGER, Instructor in Music.

Student under the eminent critic, Franz Bausemer, 1886-1891; graduate work with Herold at the conservatory of Sondershausen, Germany, 1891-93; gave private instruction, 1893-99; present position since 1899.

### WILLIAM ALEXANDER SUTHERLAND, B. S., Instructor in Spanish and Latin.

B. S., N. M. College of Agr. and Mech. Arts, 1898; Much of boyhood spent in Mexico, studying, working and teaching; Law student at Albuquerque, N. M., 1898-99; Instructor in Goss Military Institute, Albuquerque, N. M., 1899-1900; present position, 1900.

### JOSEPH FRANCIS BENNETT, JR., M. S., Assistant in Physics, Geology, and Botany.

B. S., New Mexico College of Agr. and Mech. Arts, 1897; M. S., *ibid.*, 1899. Instructor in bookkeeping and graduate student, *ibid.*, 1897-99; present position since 1899.

### GERALDINE COMBS, Assistant in Preparatory Department.

Student in High School of Linnens, Mo., 1889-93; Central College, Lexington, Mo., 1895-96. Assistant in Preparatory Department of the New Mexico College of Agr. and Mech. Arts since 1896.

### HELEN MAR MACGREGOR, Assistant in the Stenography Department, and College Stenographer.

Student, New Mexico College of Agriculture and Mechanic Arts, 1892-95; graduate, Department of Stenography and Typewriting, 1893; present position since 1897.

### ARCHIE BRUCE SAGE, B. S., Assistant in Mechanical Engineering Department.

Assistant Draughtsman, Caldwell & Peterson Mfg. Co., Wheeling, W. Va., 1892-95; six months with the Kittanning Foundry and Machine Co., Kittanning,

Pa.; one year at Lindsley Institute, Wheeling, W. Va.; student, Engineering Department, University of West Virginia, 1896-99; summer of 1898, Homestead Steel Works, Homestead, Pa.; student New Mexico College of Agr. and Mech. Arts, 1899-1900; Assistant, *ibid.*, since 1899.

FLORENCE G. THORNTON, Assistant in Preparatory Department.

Early education received in the private schools of Texas and in the Sam Houston Normal of Texas; graduated from Peabody Normal College, University of Nashville, 1885; two summer sessions under Col. Francis W. Parker of Cook County Normal School, Ill., and two in summer schools of Languages, under Harvard and Yale professors. First Assistant and Teacher of Latin, High School, Mexia, Texas, 1885-88; Principal Pecos City Public School, Pecos City, Texas, 1886-87; Teacher in City Graded Schools, El Paso, Texas, 1887-91; Ward Principal in City Graded Schools, *ibid.*, 1891-97; First Assistant and Teacher of English and Latin, High School, *ibid.*, 1897-99; present position since 1899.

CHARLOTTE A. BAKER, Librarian and Assistant in English.

Graduate State Normal School, Albany, N. Y., 1890; Special Student in English and Mathematics, Colorado College, 1893-94; Student in Library Training School, Public Library, Denver, 1894-95; Catalogue Assistant, Public Library, Denver, 1895-99; Teacher of Literature, Library Training School, Public Library, Denver, 1898-99; Cataloguer, Public Library of the City of Denver, 1899-1900; present position, 1900.

LAVINIA LEA BROWN, Assistant in Preparatory Department.

Graduate of Union Female College, Oxford, Miss. Taught in New Mexico 1892-97, two years as assistant principal of High School at Santa Fe; Principal Public School, Clifton, Arizona, 1897-99; Matron, Belmont School, Cal., 1899-1900; present position, 1900.

# Faculty Committees

## COURSE OF STUDY

Clarence T. Hagerty, *Chairman*

E. O. Wooton.....E. W. Brady

R. R. Larkin.....J. J. Vernon

## CATALOGUE

\* T. D. A. Cockerell, *Chairman*

E. O. Wooton.....R. R. Larkin

## JUDICIARY

Arthur Goss, *Chairman*

C. T. Hagerty.....H. Hadley

## BUILDINGS AND GROUNDS

Frank W. Brady, *Chairman*

J. J. Vernon.....F. Garcia

## ENTERTAINMENT

Alice Horning, *Chairman*

R. R. Larkin.....E. O. Wooton

## EXTENSION WORK AND ADVERTISING

H. Hadley, *Chairman*

T. D. A. Cockerell.....F. E. Lester

## STUDENT CONFERENCE

R. R. Larkin, *Chairman*

Alice Horning.....F. F. Barker

## BOARDING

Francis E. Lester, *Chairman*

F. F. Barker.....Alice Horning

## LIBRARY

F. F. Barker, *Chairman*

J. D. Tinsley .....J. J. Vernon

Miss Baker, *ex officio*

NOTE: The president is ex officio a member of all committees.

\* Resigned from the Faculty since his appointment.

# General Statement

## LOCATION

The New Mexico College of Agriculture and Mechanic Arts is situated at Mesilla Park, Doña Ana County. Its location in the Mesilla Valley gives it great advantages for agricultural and horticultural experiments, and is a good one from a sanitary point of view. The valley is noted for being the largest fruit and alfalfa shipping point in the Territory, and is rapidly becoming known as perhaps the finest winter health resort in the United States. The College farm is crossed near the center by a fine driveway from Mesilla Park station to the College buildings. Visitors are always welcome. Mesilla Park is on the main line of the Atchison, Topeka & Santa Fe Railroad, and is easily accessible from different parts of the Territory. Las Cruces, a town about two and one half miles distant, has a population of about 3,000 inhabitants. It has a public school, two mission schools and, a Catholic academy for the education of girls. The Presbyterians, Methodists, and Roman Catholics have church organizations, and students are always welcomed to their services.

## ORIGIN

The New Mexico College of Agriculture and Mechanic Arts, under a slightly different name, was established by the Twenty-eighth Assembly of New Mexico by act approved February 28, 1889. The purpose of the institution is defined in Section 19 of this act:—

“The Agricultural College created and established by this act shall be non-sectarian in character, and devoted to practical instruction in agriculture, mechanic arts, natural sciences connected therewith, as well as a thorough course of instruction in all branches of learning bearing upon agriculture and other industrial pursuits.”

The branches in which instruction may be given are set forth as follows in Section 20 of the same act:—

“The course of instruction of the College hereby created shall embrace the English language, literature, mathematics, philosophy, civil engineering, chemistry, animal and vegetable



anatomy and physiology, the veterinary art, entomology, geology, and political, rural, and household economy, horticulture, moral philosophy, history, mechanics, and such other sciences and courses of instruction as shall be prescribed by the regents of this institution of learning."

By Section 25 of the same act, the assent of the Legislative Assembly was given to the establishment of Experiment Stations within the Territory of New Mexico in connection with the Agricultural College, in pursuance of the act of Congress approved March 2, 1887,—the Hatch Act.

#### INCOME

The revenues of this College are derived from the following sources:—

1. Students' fees.
2. Sale of College farm products.
3. Territorial tax and special appropriations.
4. The United States, under Congressional Act of August 30, 1890—the Morrill fund.
5. The United States, under Congressional Act of March 2, 1887—the Hatch fund.

The money received from students and from the sale of products from the College farm has, so far, been very limited, and has been applied to the payment of such expenses as are not provided for by either act of Congress.

The Territorial Act creating the institution provided for an annual levy of one-fifth of a mill, commencing with the year 1889. This levy now yields an annual income of about \$6,500.

The Morrill Fund was created by the United States law of August 30, 1890, "for the more complete endowment and support of the Colleges of Agriculture and Mechanic Arts in the several States and Territories." It is paid over to them before July 31, of each year. The College received this fund first in 1890, to the amount of \$15,000. Henceforth the fund will amount to \$25,000. This fund can be applied *only* "to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic sciences, with special reference to their application

in the industries of life, and to the facilities for such instruction." *No part of this fund may be used for building or repairs, or for ordinary running expenses, such as salaries of administrative officers,—as president, clerk, librarian, etc.,—equipment of the library, and ordinary furniture, stationery, printing, etc., or for teaching any subject not referred to in the Act.* The theory of the federal government in accordance with which these appropriations have been made, is that the State or Territory must provide the buildings and grounds and keep them in repair and must also provide for all the general administrative expenses of the college, and that the federal appropriation is to be used only for the purposes of paying teachers and supplying the necessary books and apparatus for teaching the specific subjects mentioned in the Act.

By the United States law of March 2, 1887, the *Hatch Act*, appropriations are made for the maintenance of Experiment Stations in connection with Agricultural Colleges in the several States and Territories. For the support of each station there is set apart the sum of \$15,000 a year, payable quarterly. This money must be used for "paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results." Bulletins showing progress must be printed each quarter, and sent to each newspaper in the Territory and to all farmers who apply for them. This fund first became available for this College in 1889-90, to the amount of \$10,000. Since July 1, 1890, \$15,000 a year has been received. *After the first year, only five per cent of this fund may be used to erect, enlarge or repair buildings for the use of the Experiment Station; and no part of it may be applied to the expenses of instruction or to general college purposes. It must be applied exclusively to the carrying on of agricultural experiments and to the dissemination of the results thereof.*

#### ENDOWMENT

A bill has recently been passed by Congress granting this College 100,000 acres of public land, the proceeds of which are to form a permanent endowment fund. If this land be carefully located, it can be made to yield the College in time a fair endowment.

# Requirements for Admission

Candidates for admission to the *Freshman* year will be admitted without examination upon completion of the subjects of the Senior Preparatory, or "Sub-Freshman", year, or on a Certificate showing that the same or an equivalent amount of work has been completed at any of the following High Schools:

Albuquerque High School  
Deming High School  
El Paso High School  
Las Vegas High School  
Raton High School  
Roswell High School.

Other candidates must pass examinations in the following subjects:—

*English*.—Lockwood's Lessons in English, or its equivalent. No applicant will be admitted who is unable to write English fairly correct in spelling, punctuation, paragraphing, and so forth, and free from gross grammatical and rhetorical errors. Some knowledge of literature is also required.

*General History*.—Myers' General History or Sheldon's General History, or their equivalent.

*Algebra*.—Milne's High School Algebra through logarithms, or its equivalent.

*Physics*.—Shaw's Physics by Experiment, or its equivalent.

*Elementary Chemistry*.—At least twelve weeks' work.

*Physical Geography*.—Maury's Physical Geography, or its equivalent.

*Latin*.—(optional with Spanish for engineering students).—One year's work, or its equivalent.

*Physiology*.—Martin's Human body (briefer course), or its equivalent.

*Civil Government*.—McCleary's Studies in Civics, or its equivalent.

*Free-hand Drawing*.—At least a year's thorough work.

*Arithmetic*.—White's Complete Arithmetic, or its equivalent.

*History of the United States*.—Fiske's School History or Barnes' Brief History of the United States, or their equivalent.

*Geography*.—Maury's Manual of Geography, or its equivalent. *Carpentry and Wood Working Tools*, or *Domestic Economy*—as given in the Senior Preparatory year of this College. An equivalent in natural Science, language, or history, will be accepted for this work, except in the case of students who propose to pursue the Engineering course, who must take the Carpentry and Wood Working Tools.

Students coming from other colleges whose requirements for admission are substantially equivalent to those of this college may be admitted to corresponding classes here, provided they bring certificates showing amount of work completed. Other candidates for advanced standing will be examined in the subjects prescribed for admission, and also in the undergraduate studies which they desire to be credited with.

All applicants for admission must furnish satisfactory evidences of good moral character. The President and Faculty reserve the right to reject students who appear to be too immature to live away from home.

## COURSES OF STUDY

The Collegiate courses of study are as follows:

## Freshman Year

GENERAL, OR SCIENTIFIC, COURSE	AGRICULTURAL COURSE	MECHANICAL ENGINEERING COURSE	CIVIL ENGINEERING COURSE
English (Rhetoric and Composition, etc.), 5 Geometry (Plane), 5 Biology (Introduction), 10 l. Latin or Spanish, 5	Freshmen in the Agricultural Course may pursue either the studies of the General, or of the Engineering, Course.	English, 5 Geometry, 5 Biology, 10 l. Spanish or Latin, 5	Same as Mech. Engineering Course.
English, 5 Geometry (Plane), 5 Biology (Zoology first half term, Botany second half term), 10 l. Latin or Spanish, 5		English, 5 Geometry, 5 Spanish or Latin, 5 Mechan. Draw., 4 l. Iron and Steel Forging, 6 l.	
English, 5 Geometry (Solid), 5 Biology (Botany), 5 Latin or Spanish, 5		English, 5 Geometry, 5 Spanish or Latin, 5 Mechan. Draw., 4 l. Bench Work in Wood, 6 l.	

FIRST TERM

SECOND TERM

THIRD TERM

Sophomore Year

THIRD TERM	GENERAL, OR SCIENTIFIC, COURSE	AGRICULTURAL COURSE	MECHANICAL ENGINEERING COURSE	CIVIL ENG. COURSE
SECOND TERM	English (Literature), 5 Physics, 5 Latin or Spanish, 5 Elective, 5 (or 10 l.)	English, 5 Physics, 5 Trigonometry, 5 Elective, 5 (or 10 l.)	English, 5 Physics, 5 Trigonometry, 5 Pattern Making, 6 l. Foundry Practice, 4 l.	Same as Mechanical Engineering Course.
	English, 5 Physics, 5 Latin or Spanish, 5 Elective, 5	English, 5 Physics, 5 Live Stock, 2 Surveying, 6 l. Elective, 5	English, 5 Physics, 5 Descriptive Geometry, 5 Surveying, 6 l. Mech. Drawing, 4 l.	
THIRD TERM	English, 5 Physics, 5 Latin or Spanish, 5 Elective, 5	English, 5 Physics, 5 Score-card Practice, 2 l. Live Stock, 4 Elective, 5	English, 5 Physics, 5 Advanced Algebra, 3 Anal. Geometry, 2 Pattern Making, 6 l. Mach. Design, 4 l.	English, 5 Physics, 5 Advanced Algebra, 3 Anal. Geometry, 2 Surveying, 6 l. Plotting and Mapping, 4 l

FIRST TERM

SECOND TERM

THIRD TERM



## Junior Year

GENERAL, OR SCIENTIFIC, COURSE	AGRICULTURAL COURSE	MECHANICAL ENGINEERING COURSE	CIVIL ENGINEERING COURSE
English, 1 Chemistry, 5 Astronomy, 4 plus 2 l. Domestic Economy (for women), 8 l. or Elective, 4 Elective, 5	English, 1 Chemistry, 5 Meteorology or Astronomy, 4 Soils and Crops, 5 Principles of Breeding, 3 Elective, 2	English, 1 Chemistry, 5 Analytical Geometry, 5 Ele. Mechanics, 4 Machine Design, 4 l. Bench Work in Iron, 5 l.	English, 1 Chemistry, 5 Analytical Geometry, 5 Ele. Mechanics, 4 Topographical Drawing, 4 l. Topographical Surveying, 6 l.
English, 1 Chemistry, 10 l. Political Economy, 4 Domestic Economy (for women), 8 l. or Elective, 4 Astronomy, 2 l. Elective, 5	English, 1 Chemistry, 10 l. Political Economy, 4 Practical Agriculture, 5 Stock-Feeding, 4 Elective, 1	English, 1 Chemistry, 10 l. Calculus, 5 Strength of Materials, 4 Mechanism, 5	English, 1 Chemistry, 10 l. Calculus, 5 Strength of Materials, 4 Roads and Pavements, 2 Railway Surveying, 6 l.
English, 1 Chemistry, 8 l Physiology, 5 Domestic Economy (for women), 8 l. or Elective, 4 Astronomy 2 l. Elective, 5	English, 1 Chemistry, 8 l. Entomology, 10 l. Pomology, 3 plus 2 l. Elective, 6	English, 1 Chemistry, 8 l. Calculus, 5 Anal. Mechanics, 5 Steam Boilers, 5	English, 1 Chemistry, 8 l. Calculus, 5 Anal. Mechanics, 5 Irrigation Engineering, 6 l. Elective, 2

FIRST TERM

SECOND TERM

THIRD TERM

Senior Year

GENERAL, OR SCIENTIFIC, COURSE	AGRICULTURAL COURSE	MECHANICAL ENGINEERING COURSE	CIVIL ENG. COURSE
English, 2 Mineralogy, 10 l. History of Civilization, 5 Elective, 8	English, 2 Mineralogy, 10 l. Agricultural Chemistry, 6 l. Theory of Horticulture, 2 Soil Physics, 8 l. Elective, 4	English, 2 Mineralogy, 10 l. Hydraulics, 5 Steam Engine, 4 Designing, 4 l. Machine Shop, 4 l.	English, 2 Mineralogy, 10 l. Hydraulics, 5 Stereotomy, 4 Elective, 4
English, 2 Geology, 5 History of Civilization, 5 Elective, 8	English, 2 Geology, 5 Agricultural Chemistry, 6 l. Rural Engineering, 2 plus 6 l. Elective, 5	English, 2 Geology, 5 Metallurgy, 4 Roofs and Bridges, 4 l. Engine and Boiler Tests, 6 l. Elective, 4	English, 2 Geology, 5 Metallurgy, 4 Roofs and Bridges, 4 l. Elective, 7
English, 2 History of Civilization, 5 Thesis Elective, 8	English, 2 Rural Economics, 5 Dairying, 3 plus 4 l. Thesis Agricultural Chemistry, 6 l., or Elective, 3	English, 2 Electrical Engineering, 5 Engineering Structures, 5 Thesis Elective, 3	English, 2 Electrical Engineering, 5 Engineering Structures, 5 Thesis Elective, 3

FIRST TERM

SECOND TERM

THIRD TERM

## Elective Studies and Special Courses

English Literature, 3 Advanced Zoology, 4 l. Advanced Botany, 6 l. Advanced Chemistry, 6 l. History of Education, 5 English History, 5 American Law, 5	Logic, 5 Domestic Economy, 4 l. Forestry, 2 Floriculture, 2 plus 2 l. Advanced Spanish, 5 Assaying, 6 l.	Stenography, 5 Typewriting, 5 l. Music
English Literature, 3 Advanced Zoology (continued), 4 l. Advanced Botany (continued), 6 l. Advanced Chemistry (cont'd), 6 l. Applied Psychology, 5 English History (continued), 5	Domestic Economy, 4 l. Soil Physics, 6 l. Commercial Spanish, 5 Assaying (continued), 6 l.	Stenography (continued), 5 Advanced Stenography, 1 Typewriting (continued), 5 l. Spanish Stenography, 5 Music
English Literature, 3 Advanced Zoology (continued), 4 l. Advanced Botany (continued), 6 l. Advanced Chemistry (cont'd), 6 l. Advanced Geology, 3 Theory and Practice of Education, 1 plus 4	A Period of American History, 5 Domestic Economy, 4 l. Soil Physics, 6 l. Floriculture, 2 plus 2 l. Commercial Spanish (continued), 5 Assaying (continued), 6 l.	stenography (continued), 5 Advanced Stenography (continued), 1 Typewriting, 5 l. Spanish Stenography (continued), 5 Music

NOTE ON ELECTIVE STUDIES:—The figures following the Elective Studies indicate the minimum amount of time that may be devoted to them. Whenever the other work of the students or of the instructor does not prevent, a greater amount of time may be given to the subject.

The elective studies are not assigned to any particular year, but may be taken whenever the student is prepared for them, and has the necessary time at his disposal, subject always to the approval of the faculty.

In addition to the courses expressly designated as Elective Studies, any study pursued in the College, and not prescribed in the course of study that is being followed by the student in question, may be elected by him. A Student in the General Course, for example, may elect a study prescribed for Agricultural students; or, to give a more specific example, a Senior in the Engineering Course (who has four hours free for an elective in the second term) may elect Political Economy, which is given in the Junior year of the General and Agricultural Courses, provided it is given at an hour at which he is free from other engagements.

It will be seen that in the Freshman year there may be said to be two courses, the engineering students spending in shop work the time that the scientific students devote to a foreign language, and the agricultural students having their choice of either course. In the Sophomore year there is a slight difference in the work prescribed for each of the courses, and in the Junior and Senior years the distinctive work of the several courses takes a much greater part of the student's time and the four courses are quite different one from another.

It will be observed that in the general course, a large amount of work is *elective*. We have gone a little farther than most colleges in the direction of making the higher mathematics elective. This concession has been made for the especial benefit of the large number of women students who desire a non-mathematical course, in which we believe that we can provide them with an equivalent amount of culture and training. It is expected that most of the male students in the general course will elect the higher mathematics required of students in the technical courses. If the young men in the general course take all the mathematics offered they will still have time to take one full course (five hours a week) in advanced science, or in history, language, literature or philosophy, during two years, and one half course (3 hours a week) during one year.

### Special Courses

Students of mature years, who cannot remain long enough to take a full course, may be allowed to take special courses. The Faculty reserves the right to refuse such requests, or to order such modifications as may seem best for the student and the college. No degrees are granted for special work, but those who perform such work in a satisfactory manner will receive certificates.

For the course of study in the Preparatory Department, see page 59; for that in the Department of Stenography, page 55; and for the Assaying course, page 34.

## Degrees

The degree of *Bachelor of Science* (*B. S.*) is conferred on students who satisfactorily complete the work prescribed in any of the Collegiate courses of study.

The degree of *Master of Science* (*M. S.*) is conferred on students who, after taking at this College the degree of *B. S.*, pursue for at least one year here, or for two years as non-resident students, a course of study approved by the Faculty, pass an examination on the same, and present a satisfactory thesis.

# Departments of Instruction

## School of Agriculture

PROFESSOR VERNON  
PROFESSOR TINSLEY  
ASSISTANT PROFESSOR GARCIA

The School of Agriculture includes the departments of Agriculture and Horticulture and Soil Physics and Meteorology, and embraces all the work peculiar to the Agricultural Course except that in Agricultural Chemistry, given by the department of chemistry.

From this time forth it is believed that the College will be able to give a very thorough and complete course in the theory and practice of agriculture.

### AGRONOMY, OR AGRICULTURE PROPER

1. *Soils and Field Crops*.—Morrow and Hunt's "Soils and Crops of the Farm", King's "The Soil", and Roberts' "The Fertility of the Land" form the basis for the term's work.

First term, Junior. Five hours a week.

2. *Practical Agriculture*.—This course is a continuation of the first term Junior work, and includes scientific and practical problems in general agriculture as applied to the farm and ranch. Special effort will be made to apply the principles discussed to New Mexico agriculture. The College Farm affords excellent means of illustrating the work.

Second term, Junior. Five hours a week.

3. *Soil Physics*.—This work consists mainly of laboratory and field practice in the sampling of soils, determinations of moisture, salt content, water-holding power, mechanical analyses, and a brief general study of the other physical characters of soils.

First term, Senior year, 8 hours.

4. *Meteorology*.—This work will consist of lectures and recitations with accompanying laboratory practice. The common meteorological instruments, their construction and uses, and those meteorological phenomena having most direct bear-



ing on the agriculture of New Mexico, will be studied.

First term, Senior year, 4 hours.

In addition to this required work students may take elective work in Soil Physics or Meteorology either as advanced undergraduate work or graduate work.

5. *Rural Engineering*.—In a country where all the farming is done by the aid of irrigation, a course in rural engineering is of great importance. The planning of ditch-systems, the application of water to the land, the economic use of fields and crops, roads, buildings, and machinery comprise the general subjects of the course.

Second term, Senior. Two hours a week in class room and six hours laboratory.

6. *Rural Economics*.—History of agriculture, farm management, and rural law are among the subjects in this course.

Third term, Senior. Five hours a week.

#### ZOO TECHNY, OR ANIMAL INDUSTRY

This course aims to meet the growing needs of the Territory, inasmuch as stock raising is one of the leading industries. The subjects are pursued from a practical and scientific standpoint, having in view the thorough equipment of young men for successful work in breeding, care, and management of large herds.

7. *Live Stock*.—This course includes a study of the history, development, characteristics, selection, points of utility, etc., of the different breeds of cattle.

Second term, Sophomore. Two hours a week.

8. *Live Stock*.—The subjects of selection, care, and management are continued this term with the various breeds of horses, sheep, and swine. Special attention is given to a discussion of breeds best adapted to New Mexico conditions. The subject matter of the text is supplemented by lectures. Throughout the course in Live Stock practical demonstration of the various points under discussion is made with individual animals of the college herd; also, occasional trips will be plan-

ned, having in mind a study of the breeds, methods of handling, and local conditions of the various herds in this section.

Third term Sophomore. Four hours a week.

9. *Score-Card Practice*.—Animals are brought before the class for demonstration and scoring. Lovelock's American Standard of Excellence will be largely followed in judging cattle, sheep, and swine. A familiarity with the standards for the leading breeds is sought for. This work is specially valuable for young men who expect in any way to deal with the live stock interests of the Territory. The work is coincident with the study of breeds of animals.

Third term, Sophomore. Two hours laboratory a week.

10. *Principles of Breeding*.—This course covers the laws governing the breeding of animals; and includes the principles of heredity, laws of correlation and variation, in and in and cross breeding, parentage, form types, and pedigree. Attention is given to the subject of breeding for beef and for the dairy.

First term, Junior. Three hours a week.

11. *Stock Feeding*.—The subject includes animal nutrition, chemistry of feeding stuffs, nutritive ratios, making rations, and a careful inquiry into the nutritive value of stock-foods available on the ranches and markets of New Mexico. Feeding experiments are conducted by the Experiment Station and students will thus have an opportunity for practical observations in scientific feeding for beef or mutton and for the dairy.

Second term, Junior. Four hours a week.

12. *Dairying*.—The course in dairying comprises a study of the properties of milk and methods of handling milk and its products in the private dairy and in the thoroughly equipped creamery. Receiving and weighing, testing, separating, ripening cream, churning, pasteurizing, and marketing are subjects discussed in class-room. Instruction is also given in the principles of the Cheddar system of making cheese.

Third term Senior. Three hours a week in class-room and four hours laboratory.

## HORTICULTURE AND FORESTRY

13. *Pomology*.—The subjects of cultivation, propagation, thinning, pruning, spraying, irrigation, and other related topics will be discussed. The extensive orchards and vineyards on the College Farm and several commercial orchards and vineyards in the vicinity afford unusual means of illustration. The student will have an opportunity to become acquainted with varieties of fruits which are adapted to the conditions in this section. In class-room the work will consist of text-books, discussions and supplementary reading. The laboratory work will consist mostly of making cuttings, budding, grafting, pruning, and spraying. "The Nursery-Book" and "Principles of Fruit-Growing" by Bailey, are the text-books used.

Spring term, Junior. Three hours a week in class room and two hours laboratory.

14. *Theory of Horticulture*.—The student, having largely completed his biological studies, is prepared for a discussion of the principles underlying horticultural methods. Plant breeding, the influence of environment,—climate, soil, altitude, food, —and similar topics will be discussed.

Fall term, Senior. Two hours per week.

15. *Economic Entomology*.—Spring term, Junior year. Ten laboratory hours a week.

16. *Forestry*—Elective.—The course in forestry is offered to Agricultural and Scientific students who have had sufficient preliminary training in biology. The nature of the course will be the study of wind-breaks, home planting, utility of forest plantations, and the general influence of forests on the climate and water courses. The subjects of forest reserves and forest-tree planting will also receive careful attention.

Spring term. Two hours per week.

17. *Floriculture*.—Elective.—The course in Floriculture is designed to be of a popular nature, and is especially adapted for women students. It consists of lessons in the propagation and management of flowering and foliage plants. Practice in

seed-sowing, potting, transplanting, and taking of cuttings is offered. The greenhouse and equipments and forcing frames afford the necessary material and conveniences for the work.

Fall term Freshman. Two hours class-room work and two hours laboratory.

18. *Floriculture*—Elective.—This course is a continuation of course number 17. Borders, grouping, and arrangement of flowers, trees, and shrubbery for ornamental effect, will be considered. Attention will be given to the subject of ornamental gardens and the arrangement of home grounds considered from the landscape gardener's standpoint.

Spring term, Freshman. One hour recitation and two hours laboratory.

*Equipment.*—The College Farm includes 108 acres under irrigation. In addition to carefully arranged experiments in many lines of agriculture and horticulture, which cannot fail to be instructive and interesting to the student, the farm orchard includes many varieties of apples, pears, peaches, plums, and apricots. Over a hundred varieties of grapes are grown, and new varieties of large and small fruits are added each season. The vegetable garden, flower garden, and greenhouse are ample for present needs. Large and commodious buildings are in process of construction which will afford ample space for horses, cattle, sheep, implements, granaries, tool room, etc. The corral and grounds are provided with good water furnished by a wind-mill and storage tank. Important additions of pure bred stock will be made during the year.

The College is especially well equipped for work in *Soil Physics*, this being one of the prominent lines of investigation of the New Mexico Agricultural Experiment Station. The laboratory is supplied with electrical apparatus for determining salts in soils, electrical soil hygrometer and accessories, drying ovens, balances and weights, and the necessary glass ware and reagents for carrying on the investigations of the physical properties of soils and their salt content.

For the work in meteorology we have the usual instru-

ments furnished voluntary observers and an anemometer in addition.

This summer we hope to add considerably to our equipment. Among the contemplated additions are centrifuge for mechanical analyses, apparatus for measuring the amount of water applied in irrigation, and several self-recording meteorological instruments.

*Student Labor.*—While it is not the policy of the school to make labor for the students, yet industrious workers will be encouraged, so far as the short hours at their disposal can be employed with profit to the Department. Students in the Agricultural course will be given preference in the work of the farm and gardens.

## Biology, Geology, and Physics

PROFESSOR WOOTON

MR. LARKIN

MR. BENNETT

### BIOLOGY

*Biology 1.*—All students in the regular college courses are required to take Biology during the Freshman year and to devote ten hours per week of laboratory work to the subject. The work of the first term will be an introduction to the fundamental principles of animal and plant life by means of lectures and text-book work, after which students will study types of all the larger classes of animals. Emphasis will be placed upon those features of animal anatomy which show most plainly the developmental history of the classes which the types represent and their relationships to each other.

*Biology 2.*—The above course will be continued during the first half of the second term. During the second half of this term students of this course will commence the study of the botanical side of the subject. The method of presentation and work will be that already pursued. Dr. Campbell's *Evolution of Plants* will be used as the text and laboratory directions will be furnished by the teacher.

*Biology 3.*—This will be a conclusion of the work in botany begun the previous term.

The whole course in Biology is designed to be general and more or less elementary in character. It is intended to give the student a general view of animate creation and the relations existing between the various parts of it and so let him learn his own position as a member of this creation.

*Elective Work.* Courses in "Systematic Zoology," "Physiological Botany," "The Classification of the Flowering Plants," and "Economic Botany" will be offered by this department as electives to students qualified to take such work. Biology 1, 2 and 3 will be prerequisite to such courses, as well as some work in other sciences.

This work can generally be so arranged with the teacher, that students may do work in almost any line in which they are interested, and receive credit for any number of hours which they may have at their command aside from the regularly required work.

*Equipment.*—The laboratories of this department occupy rooms in the second story of the Science Hall. These laboratories are equipped with all apparatus necessary for the courses outlined above.

The department library is well supplied with books on all subjects relating to the work.

The herbarium contains several thousand plants, and additions are constantly being made. Advanced students, especially in systematic botany, will have access to it in connection with their work.

Considerable zoological material is now in the possession of this department, and will be at the command of advanced students.

#### PHYSICS

*Physics A.*—Junior Preparatory students will devote five hours each week during the first of the year to this subject, using Shaw's Physics by Experiment as a text-book. The major portion of the time will be devoted to the fundamental



conceptions of matter and force and the laws governing each and the application of these laws in the simpler machines.

Physics 1, 2, and 3.—Sophomores of all courses are required to devote one full year to this subject.

The first term will be devoted to the study of the general laws of matter and force, and the subject of heat; the second term, to sound and light; and the third term, to the subjects of electricity and magnetism.

Gage's Elements of Physics will be used as a text-book, with Ganot's Physics and Sylvanus Thompson's Elementary Lessons in Electricity and Magnetism as reference books. Particular stress will be laid upon the mathematical side of the subject, as being the best way to grasp its principles.

The Physics Department is supplied with a good laboratory and plenty of apparatus and the principles studied will be demonstrated in class. Students will be required to do two hours work per week throughout the year in the laboratory, performing experiments that require exact physical measurements.

#### GEOLOGY

1. *Mineralogy*.—The first term of the Senior year will be devoted to the subject of mineralogy, using Dana's work on this subject as a reference book, and the collection of minerals in the possession of the department as a basis for the work. Most of the time will be occupied with work in determinative mineralogy, using Foye's Handbook of Mineralogy as a laboratory guide.

Minerals of economic importance will receive most of the attention of this class, but the commoner rock-making minerals will be studied.

2. *Geology*.—All Seniors are required to take a course of five hours per week in general geology during the second term.

The work will cover the general principles of dynamical, structural, and historical geology as set forth by Scott in his Introduction to Geology.

3. *Geology*.—A course in Paleontology will be offered to students who have taken Geology I and sufficient work in Zoology and Botany to fit them for carrying on such work. Students taking this course will be credited with three hours per week for one term.

## Chemistry

PROFESSOR GOSS

ASSISTANT PROFESSOR HARE

### REQUIRED WORK

*A. Senior Preparatory Chemistry, first term.*—The chemistry in the Senior Preparatory year consists of a study of the subject as outlined in an elementary text book. The work will be supplemented by frequent experiments performed before the class. The chemistry of this year is intended as a preparation for the different branches of science taught later. The time required for recitations is one hour four times per week.

1. *Junior Chemistry, first term.*—The work during the first term of the Junior year consists of a study of the principles of general inorganic chemistry as outlined in Remsen's "Introduction to the Study of Chemistry." The text-book work is supplemented by frequent exercises in the laboratory. The time required during this term is one hour daily.

2. *Junior Chemistry, second term.*—During this term, the work of the first term is continued and the subject of qualitative analysis begun. The work during this term is principally in the laboratory. Each student is provided with a complete set of apparatus and reagents, and with a conveniently arranged locker, supplied with a combination lock, in which to keep his apparatus. The time required during this term is two hours daily.

3. *Junior Chemistry, third term.*—The work this term is entirely in the laboratory, being a continuation of the subject of qualitative analysis commenced the previous term. Upon the completion of this term's work, students are expected to be able to analyze ordinary compounds. The time required during this term is two hours, four times per week.

4. *Agricultural Chemistry, first term.*—During this term, chemistry as related to agriculture is given to students in the Agricultural course. The work consists of a text-book study of such subjects as animal nutrition, plant food, and fertilizers, as presented in Warington's "Chemistry of the Farm." The lectures occur three times per week, in the Senior year.

5. *Agricultural Chemistry, second term.*—During this term, laboratory work in the analysis of agricultural products, waters, soils, etc., is given to Senior students in the Agricultural course. The work occupies three two-hour periods each week during the term.

7. *Metallurgy.*—During the second term of the Senior year Metallurgy is required of regular students in the Mechanical and Civil Engineering courses. It is also given to students taking assaying. The work is presented in the form of lectures and recitations, which occur four times per week. The text used is Hiorn's "Text Book of Elementary Metallurgy." Besides the regular text-book work, a course of supplementary reading is also required of the students.

#### ELECTIVE WORK

6. *Agricultural Chemistry, third term.*—In this term, the work of the second term in Agricultural Chemistry may be continued.

8. *Assaying, Dry Methods, first term.*—For the accommodation of those of our students who desire to take up this branch, instruction is given during the first term in the fire assay of gold, silver, and lead ores. Each student is assigned furnaces, and is supplied with the necessary crucibles scorifiers, material for making fluxes, etc. Besides other necessary apparatus, he also has the use of balances for weighing out charges, mixing fluxes, and weighing gold and silver beads.

9. *Assaying, Wet Methods, second term.*—During this term, a study is made of the quantitative determination of copper, iron, lime, silica, etc., by the best volumetric and gravimetric methods.

10. *Assaying, third term.*—The work during this term relates chiefly to the composition and metallurgy of ores. Students are encouraged to make original studies of methods for the extraction of metals from their ores, in order to determine which are most applicable and economical in particular cases.

The work in assaying is principally in the laboratory, but is supplemented by a course of reading in standard books on assaying, analytical chemistry, etc.

The time required during the year, of students taking assaying, is six hours per week. It will usually be possible, however, to arrange for extra work; and students are strongly urged to do so when possible, as the amount of knowledge gained in this subject depends almost entirely upon the time devoted to it in the laboratory.

Students taking assaying are also required to take the regular work in chemistry, geology, mineralogy and metallurgy.

Students will not be admitted to the course in assaying, who have not had sufficient preliminary training to enable them to carry the work.

11. *Elective Chemistry, Senior year, first term.*—For regular students who elect chemistry during the first term of the Senior year, the work consists of laboratory practice in general quantitative analysis. During this term, students receive instruction in the use of the balance and in general quantitative manipulation. Each student is required to make some of the fundamental quantitative determinations, thus becoming familiar with quantitative processes by actual practice. The time required is six hours per week.

12. *Elective Chemistry, Senior year, second term.*—The nature of the work done during the second term of the Senior year is left largely to the choice of the student; but, in general, usually consists of work along some line of original investigation. The work, especially during the latter half of the term, should be along the line leading up to the thesis work to be taken up the next term. The work of this term is entirely in

the laboratory. The time required is six hours per week.

13.—*Thesis Work, Senior year, third term.*—During this term, Senior students, who elect chemistry for their thesis work, are required to take up some line of original chemical investigation, and prepare a paper on the same. The time required for this work is ten hours per week, during the term, but students usually find it necessary to put in about all their available time during the afternoons. The work is principally in the laboratory, supplemented by a course of outside reading. While but one term is required for the thesis work, it is much better to select the subject in the second term and devote a considerable portion of that term to the work.

14.—*Post-Graduate Work.*—Advanced work in chemistry, leading to the degree of M. S., is offered to post-graduate students who elect work in the chemical department. The character of the work selected is left largely to the choice of the student, subject to the approval of the head of the department. The work taken up, however, must consist largely of original research along some line of chemical investigation. It practically amounts to a continuation of work of the same character as the thesis work of the Senior year, although, of course, the subject may be different.

#### EQUIPMENT

The chemical department occupies all of the lower floor of the Science Hall, with the exception of one room. The college work and station work have separate quarters. Five good sized rooms, and a smaller store room, are used in the instruction of students, and three rooms and a store room, for the station work. A small brick building, located at a safe distance from the main building, is also used by the department as a store house for gasoline and other combustible and explosive substances.

The rooms set apart for use in the instruction of students are as follows:—

1. A large qualitative laboratory for students beginning the study of chemistry. This laboratory is fitted with work

desks which are supplied with gas, water, and drain, and have drawers and lockers with combination locks. The qualitative laboratory also contains, among other things, a sink, and a fume closet for work in which noxious gases are present.

2. A quantitative laboratory for the use of advanced students. This laboratory is supplied with two entirely new, thoroughly equipped, work desks, fitted with gas and water pipes, a drain trough through the centre, a bottle rack on the top, and drawers and lockers with combination locks. This laboratory also contains a first-class large fume closet and a sink.

3. A fire-proof assay laboratory, which contains six gasoline crucible furnaces and two muffle furnaces. This laboratory is also supplied with a Bosworth ore crusher, a sampling plate, a complete set of sieves, crucibles, tongs, cupel moulds, and other accessories necessary in a well equipped laboratory of this character.

4. A weighing room, opening into the quantitative and assay laboratories. This room is fitted with a substantial balance table mounted on brick piers in contact with the ground, thus insuring freedom from floor vibration. This room is, at present, supplied with an Eimer and Amend gold-plated assay balance sensitive to the one two-hundredth of a milligram, two chemical balances, and a heavier balance for rough weighing. This room is also provided with a large table on which to mix assay charges etc., and with a case for sample bottles.

5. A lecture room, supplied with a lecture desk, a sink, gas, blackboards, and other accessories.

6. A conveniently-located store-room for chemicals and general laboratory supplies for students.

The laboratories used for the chemical work have brick walls, and wooden ceilings, fourteen feet high. Each laboratory is also supplied with one or more ventilating flues which aid in the removal of fumes and in the ventilation of the rooms. The general equipment of the laboratories has been very materially increased, and is modern and first-class in every particular.



The laboratories fitted up for the accommodation of the Experiment Station work contain, among other things, three work desks supplied with gas, water, and air exhaust pipes for rapid filtration, a commodious hood to carry off noxious gasses, apparatus for the determination of nitrogen by the Kjeldahl method, a titration shelf and system of burettes, and a first-class still for the preparation of distilled water. The Station equipment also includes a balance table mounted on brick piers in contact with the ground, a Herzberg and Kuhlmann short beam automatic analytical balance, a Springer torsion balance, a Scheibler's polariscope, an imported mill for grinding samples, and about \$500 worth of platinum ware.

While the Station laboratory is not designed for the use of students, the work carried on there serves to illustrate actual practical analytical work.

The chemical department also has a collection of mineral specimens for class use, and quite a large department library of reference books and periodicals.

The gas supply for the department is furnished by a new, 200 light, Matthews gasolene gas machine, which is provided with an automatic mixer whereby the gas is kept uniform in quality.

The water supply for the department is furnished by a deep well on the college grounds, the water of which is of much better quality than most of the well waters of the valley.

#### FEEES

At the beginning of the work in chemistry in any year except the Senior Preparatory, each student will be required to deposit five dollars with the Registrar, to cover breakage of apparatus. At the close of the year, or upon withdrawing from the class, the balance of this deposit, after deducting cost of broken apparatus, will be returned to the student.

At the beginning of each term, each student taking furnace work in assaying will be charged five dollars to cover cost of gasolene and fluxes used. No part of this fee will be returned unless the student should withdraw before the end of the

term. Besides the above fee of five dollars, each student taking furnace work in assaying will be required to deposit ten dollars at the beginning of each term, to cover cost of crucibles, scorifiers, and other apparatus used up or broken during the term. The balance from this deposit which is not used will be returned to the student at the end of the term. At the beginning of the wet work in assaying, each year, each student will be required to have on deposit with the Registrar, five dollars, to cover cost of broken apparatus, as under the preceding paragraph. If, however, the student has a balance of five dollars, or more, from the deposit for furnace work in assaying, no additional deposit will be required.

## Civil Engineering

PROFESSOR REED

This has just been made a separate department, and the professor was not appointed in time to prepare a detailed statement of the work of his department for the catalogue.

## Domestic Economy

PROFESSOR HORNING

*Senior Preparatory.*—A course in practical cookery will be given to young women during the second and third terms, six hours per week being given to the work, which will consist of three two-hour lessons, and will be known in the winter and spring terms as *Domestic Economy B* and *A*, respectively.

The course will cover the principles underlying plain cookery, and will endeavor to prepare students for practical work in their homes.

*Junior Year.*—A more advanced course will be given in the Junior year, in which the time will not be wholly devoted to practical cookery, but some instruction will be given in the proper combination of foods, chemistry of foods, and the physiology of digestion. This course, *Domestic Economy 1, 2, & 3*, will run throughout the year.

*Elective Work.*—Any women students who are prepared for

it will be given the option of electing more advanced work. This will consist in practical lessons in invalid cookery, lectures on diet in disease and home sanitation. These courses will be known as *Domestic Economy* 4, 5, & 6.

## English and Latin

PROFESSOR BARKER  
MR. SUTHERLAND  
MISS BAKER

### ENGLISH

#### *Prescribed Courses*

In the English work the time is divided nearly equally between Composition or Rhetoric and Literature. As far as possible the two branches are made to supplement each other.

The work in Rhetoric consists chiefly in writing themes. These are criticised by the instructor in private conference with the student. Common grammatical and rhetorical errors committed in the themes, and the leading principles of composition involved, are discussed informally before the class. In these discussions all students are expected to take part. It is a feature of the English course that all written work done in other departments of the College is also submitted to the instructor in Rhetoric for criticism.

In the study of Literature students are encouraged to form opinions of their own about what they read; and to express their opinions with intelligence, precision, and brevity. In addition to the regular class work in Literature, certain outside reading is required, but not more than one book a month. The books assigned are such as the students in the course might read for their own pleasure.

English C, B, and A.—Rhetoric and Literature.—Two hours a week throughout the year, for students in the Senior Preparatory Class.

English 1, 2, and 3.—Rhetoric and Literature.—Five hours a week throughout the year, for Freshmen.

English 4, 5, and 6.—English Literature,—The History

and Development of English Literature in outline.—Five hours a week throughout the year, for Sophmores.

English 7, 8, and 9.—Rhetoric.—One hour a week throughout the year, for Juniors.

English 10, 11, and 12.—Rhetoric and Literature.—Two hours a week throughout the year, for Seniors.

### *Elective Courses*

English 13, 14, and 15.—English Literature.—Three hours a week throughout the year.—This course will not be given in 1900-1901.

English 16, 17, and 18.—Versification.—An attempt is made to give practical instruction in metrical composition. This course will be accepted as an equivalent of the prescribed English 7, 8, and 9; or of half the prescribed English 10, 11, and 12. A student will not be admitted to the class unless in the judgment of the instructor he has some natural aptitude for the work.

### LATIN

Latin C, B, and A.—Five hours a week throughout the year, for students in the Senior Preparatory class.—Prescribed for all students except those taking Engineering courses, who are required to elect either Latin or Spanish.—A study is made of the common inflected forms and of those Latin roots that occur frequently in the English language, having in view the special needs of the science student. Collar and Daniel's is used as a text book. The Roman pronunciation is followed.

Latin 1, 2, and 3.—Five hours a week throughout the year.—Open to Freshmen in the General and Agricultural Courses, who are required to elect either Latin or Spanish.—Lhomond's *Viri Romae* and *Caesar's* Commentaries.

Latin 4, 5, and 6.—Five hours a week throughout the year.—Open to Sophomores in the General Course, who are required to elect either Latin or Spanish.—Cicero's Orations, Virgil's Aeneid, and Latin Prose Composition.

## History and Philosophy

PROFESSOR HADLEY  
PRESIDENT SANDERS

## HISTORY

The purposes aimed at in the teaching of history in this department are: (1) to acquaint the student with the most important facts of history; (2) to train him to interpret these facts into the prevailing thought of the people at the time of the events; and (3), incidentally, to direct the student's attention to such standard literature as will assist him to get a vivid idea of the life of the time of which it treats.

The work in history embraces the following courses:

General History—four hours per week, by Senior Preparatory students, and required of all candidates for admission to the Freshman class.

History of Civilization.—This course (*History 5, 6, & 7*), running throughout the Senior year, is described in connection with the work of the department of Political and Economic Science, which see.

History of Education—elective—five hours per week during the first term of the school year.

History of England—elective—five hours per week during the first and second terms.

Detailed study of a Period of American History, elective, five hours per week, during the third term.

*General History*.—(The text used is Myer's *General History*):

History C.—The most important points in the history of oriental peoples; the same of Greece and of Rome to the close of the Punic wars. Fall term.

History B.—The history of Rome completed, and the period of Medieval history. Winter term.

History A.—An outline of the Modern period of history. Spring term.

*History of Education* (*History 1*).—This course is elective, and may be taken by any student above the Freshman class.

From a new point of view it affords a valuable review of many topics passed over in the study of General History. It is of value to the general scholar, but is of special interest to all who contemplate teaching. The subject is taught in such manner as to keep constantly in mind the relations existing between the demands made upon the citizen and the kind of training—education—given to the youth. Considerable attention is given to the theories held by educational reformers, and to great educational movements. Together with courses Philosophy 2 and Philosophy 3, this course makes a year's work in pedagogy. Fall term.

*English History*, elective, may be taken during the first and second terms of the school year. Care is taken to have the student become familiar with the growth of the English nation, and to observe carefully the steps by which it has acquired political and religious freedom. The guiding texts are Montgomery's Leading Facts and Green's Short History of the English People. This subject is pursued as courses.—

History 2.—The work as presented in Montgomery's Leading Facts through the period of the reign of the Tudors, and the careful reading of selected and related portions of Green's Shorter Course.

History 3.—The same work continued, the text mentioned.

*American History, a Period of*, (History 4)—elective—may be taken five hours per week during the third term. It is adapted to students with the advancement of the Sophomore class. The purpose is to give a detailed historical knowledge of some one period. In one year it may be the study of American Colonial Institutions to the adoption of the Constitution; in another, it may be the History of the United States Constitution; and in another, Political and Institutional History of the United States since 1798.

#### PHILOSOPHY

*Applied Psychology* (Philosophy 1)—elective—may be taken five hours per week during the second term of the school year,



by students of advancement equal to that of the Sophomore year. The purposes are (1) to introduce the student to the contemplation and study of the phenomena of spirit in contrast with the study of those of matter; (2) to introduce him to a study of the intimate relations existing between mind and body; (3) to acquaint him with the elementary and fundamental phenomena of mind-sensation, attention and discrimination, perception by the senses, etc.; (4) to constantly show how this knowledge may be applied to the solution of the problems of practical life and especially to the teacher's problems. Some knowledge of psychology is not only valuable to the person of general culture, but it is necessary. It is of especial interest to those who contemplate teaching. All correct methods of teaching are derived from a knowledge of mind and the processes of mental development. This course and that in the History of Education (History 1, *supra*), and the course in the Theory and Practice of Education (Philosophy 2, *infra*), make a year's work in pedagogy, which, it is believed, will be valuable for those who are to teach.

*Theory and Practice of Education* (Philosophy 2).—This is a double course, one hour a week being devoted to a discussion of the fundamental principles of education, conducted by President Sanders (Philosophy 2a); and the other four hours to a practical application of pedagogical principles in the teaching of some elementary subject, conducted by Professor Hadley (Philosophy 2b). During the year 1900-1901, the subject matter of the course Philosophy 2b will be arithmetic. Experience shows that many graduates of colleges, when they enter upon practical life, find themselves deficient in the ready application of some of the necessary branches of study which they pursued during their first years at school. This is especially true of arithmetic, and the teacher, the salesman, or the accountant finds that he must acquire proficiency after he has entered upon his labors. The subject of arithmetic will be thoroughly reviewed in such a manner as to meet this need. Every conceivable application of the subject will be kept in view.

*Logic* (Philosophy 3).—An elective course in inductive and deductive logic, given in the fall term, is especially designed for those who do not pursue the study of the higher mathematics, and who it is thought may be especially benefited by a direct critical examination of the forms of thought,—something that is less necessary for those who receive a great deal of indirect training in formal thinking through their study of mathematics and the other so-called exact sciences.

## Mathematics and Astronomy

PROFESSOR HAGERTY

### *Mathematics*

C, B, A. *Algebra*. Five hours throughout the year. Involution, evolution, radicals, quadratics, ratio, proportion, variation, progressions, imaginary quantities, inequalities, indeterminate equations, logarithms, permutations and combinations, and the binominal theorem (positive integral exponent). Required for admission to the Freshman class. The completion of Milne's High School Algebra to the binominal theorem inclusive, or an equivalent, is a sufficient preparation for admission to the Freshman class.

1, 2. *Geometry, Plane*. Five hours, first and second terms. Required of all Freshmen. Nearly one third of the time is given to original exercises.

3. *Geometry, Solid*. Five hours, third term. Required of all Freshmen.

4. *Trigonometry, Plane*, including an introduction to *Spherical*. Five hours, first term. Required of all Sophomore students in Engineering and Agriculture; elective for all other students who have passed in 1, 2, and 3.

5. *Algebra*. Three hours, third term. Variables and limits, undetermined coefficients, binomial theorem (any exponent), series, and theory of equations. Required of Sophomore students in Engineering; elective for all other students who have passed in 1, 2, 3, and 4.

6. *Analytic Geometry*. Two hours, third term. Loci and their equations, straight line and circle. Required of Sophomore students in Engineering; elective for all other students who have passed in 1, 2, 3, and 4.

7. *Analytic Geometry*. Five hours, first term. Continuation of course 6. Transformation of co-ordinates, parabola, ellipse, hyperbola, general discussion of the equation of the second degree having two variables, discussion of a few of the higher plane curves, and loci in space. Required of Junior students in Engineering; elective for all other students who have passed in 6.

8, 9. *Calculus, Differential and Integral*. Five hours, second and third terms. Required of Junior students in Engineering; elective for all other students who have passed in 5, 6, and 7.

#### *Astronomy.*

1. *General Astronomy*, Five hours, first term. Recitations, lectures, and use of portable telescope, with  $4\frac{1}{2}$  inch objective, and magnifying powers ranging from 50 to 400. Required of Junior students in the General Course; elective for all other students who have passed in Mathematics 1, 2, and 3.

Courses 2 and 3.—Continuation of course 1. One hour, second and third terms. The greater part of this work will consist of evening observations, two hours of which is considered the equivalent of one hour lecture or recitation. Required of Junior students in the General Course; elective for all other students who have passed in 1.

## Mechanical Engineering

PROFESSOR BRADY  
MR. MILLS  
MR. SAGE

Instruction in this course is given by lectures, recitations, and practice, so combined as to constitute a symmetrical course of study. The endeavor is to provide the student with a broad foundation of general and theoretical knowledge,

together with a liberal amount of practice in the line of his chosen profession.

Much time is necessarily devoted to higher mathematics and to technical subjects; yet certain fundamental studies, necessary to a broad and liberal education, such as physics, chemistry, biology, languages, literature, political economy and history are amply provided for.

The student is given a thorough training in the theoretical branches underlying the science of machines, together with a clear understanding of the practical construction of mechanical devices. In addition to the advanced mathematical and general studies common to other courses, this course includes instruction in mechanical drawing, descriptive geometry, theoretical and applied mechanics, hydraulics, engineering structures, metallurgy, electrical engineering, strength of materials, mechanism, machine design, steam engineering and shop practice, and the student also has the privilege of several electives.

*Free-hand Drawing.*—The importance of free-hand drawing as a discipline for the powers of observation, can hardly be overestimated. It educates the eye to note accurately all details of position and form, and trains the mind and hand to reproduce correctly what the eye sees. Elementary free-hand drawing is begun in the lower grades of the preparatory school, and advanced free drawing (Mech. Eng. B & A), is given during the last two terms of the Senior Preparatory or Sub-Freshman class.

*Mechanical Drawing.*—All engineering students take Mechanical Drawing during the Freshman year (Mech. Eng. Courses 7, 8, and 9) and one term (Mech. Eng. Course 10) of the Sophomore year. This subject embraces instruction in the use and care of drafting instruments, exercises in geometrical construction, lettering, plane projections, shading and coloring; followed by detail and assembled working drawings of machinery with tracings and blue prints therefrom.

During one term each of the Sophomore (Mech. Eng.

Course 11) and Junior (Mech. Eng. Course 12) years, Mechanical Drawing is merged into Machine Design, of which it forms an important part, and affords constant opportunity for further practice in making drawings of standard types of machinery. The work in this subject consists chiefly in the design of the elements of machinery, such as bolts, rivets and riveted joints, journals and bearings, pulleys, gears, etc.

*Descriptive Geometry* (Mech. Eng. Course 13) is taught during the second term of the Sophomore year. In this the principles of orthographic projection, development of lines and surfaces, etc., are fully discussed in the class room; and a great variety of problems, illustrating both general and special cases, are solved and constructed in the drafting room.

*Elementary Mechanics*.—In this subject, (Mech. Eng. Course 14) the general laws of statics and dynamics are studied with reference to solids, liquids and gases; and the fundamental principles are applied to the solution of a wide range of problems.

*Mechanism*.—Under this head (Mech. Eng. Course 15) are studied the principles underlying the action of the elementary combinations of which all machines are composed; the communication of motion by gear-wheels, belts, cams, screws, link-work, etc.

*Strength of Materials*.—This subject (Mech. Eng. Course 16) embraces a study of the characteristics, method of manufacture, and useful properties of the various materials of construction; and a mathematical investigation of their strength, elasticity, and other physical properties.

*Hydraulics* (Mech. Eng. Course 17) includes the study and application of the principles of the subject to the various problems involved; such as the flow of water through orifices, short and long tubes, conduits, and in open channels; gauging streams, measurements of water power, etc.

*Steam Boilers*.—Under this head (Mech. Eng. Course 18) the principles underlying the construction of the various forms of steam boilers are studied. Attention is given to the vari-



ous details in their design and operation, such as the size of flues, thickness of plates, style of riveting, bracing, the amount of grate and heating surfaces, etc.; also the various attachments.

*Engineering Structures.*—This study (Mech. Eng. Course 19) embraces a study of the design and construction of foundations and superstructures, the selection of materials, superintendence, specifications, etc.

*Steam Engine.*—The student makes a study (Mech. Eng. Course 20) of the general principles of the steam engine and of the various types in common use, and investigates the many problems relating to their structure and efficiency.

*Metallurgy.*—This includes a study (Chemistry 7) of various fuels and refractory materials; principle iron ores and their reduction according to modern methods and the processes employed in the preparation of the finished products.

In *Electrical Engineering* (Mech. Eng. Course 21) the student is drilled in the fundamental principles of electric power generation and the application of electricity to lighting, street railway, and mining work.

*Roofs and Bridges.*—In roofs, bridges, and arches (Mech. Eng. Course 22) the student will be given a drill in determining stress by both the graphical and analytical methods, and in making drawings of the details of construction.

*Analytical Mechanics* (Mech. Eng. Course 23) embraces a study of the laws of equilibrium, motion, work and energy, as applied to particles and rigid bodies; also a study of the center of gravity and the moment of inertia.

*Engine and Boiler Trials.*—In this subject (Mech. Eng. Course 24) the student makes a study of the principles and the methods involved in determining the efficiency of engines and boilers and applies the same in the engineering laboratory.

*Shop Practice*, offering, as it does, practical illustrations of the precepts taught in the class room, is a most essential part of the Mechanical Engineering course, and this work is given



a prominent position. The work is begun and is required of all male students in the second and third terms of the last preparatory year, and continues through seven terms of the regular engineering course. This work embraces carpentry (Mech. Eng. Course D), wood turning (Mech. Eng. Course C), blacksmithing (Mech. Eng. Course 25), foundry practice (Mech. Eng. Course 26), pattern making (Mech. Eng. Courses 27 and 28), and general machine work (Mech. Eng. Courses 29 and 30). The manual training is supplemented by lectures on the various tools and machines used in the laboratory.

*Equipment.*—The department has two commodious buildings devoted to its work. One has rooms for a blacksmith shop, foundry and storage. The other contains two recitation rooms and a hall, an engine and boiler room, and rooms for wood work and for machine work.

In the forge room are eight forges of the latest model, with improved underground arrangements for the blast and exhaust pipes. Each forge is fitted with a full set of tongs, hammers, swages, fullers, etc. An 18-inch drill press and a punching and shearing machine form part of the outfit of this section.

The wood room has seven turning lathes, one combination rip and cross-cut circular saw, one Fox trimmer, a forty-inch grind stone, one 18-inch x 6-inch surface planer, one No. 3 patent strain scroll saw, and a good supply of small tools and appliances.

In the machine room there are one 16-inch x 6-foot tool room lathe with compound rest and taper attachment, one 14-inch x 8-foot standard engine lathe, one 24-inch x 24-inch x 6-foot planer, one 22-inch power drill press, one improved double wheel emery grinder; also a large number and good assortment of drills, chucks, small tools and machine attachments. A 12-H. P., 250 volt dynamo, and an 8-H. P. motor with switch-board instruments, a standard steam gauge tester, an air pump and reservoir, steam indicators for steam and oil engine testing, a gas meter, and two planimeters also belong to the

machine room equipment. A well arranged tool room contains an assortment of supplies and special tools for general work.

The power equipment consists of one 40-H.P. tubular boiler, feed water purifier, a duplex pump, a deep-well pump, one 8-H.P. Shipman engine, one 30-H.P. Weston automatic engine, and a 13-H.P. oil engine.

*Surveying.*—The instruction in this subject (Surveying 1), will be such as to render the students familiar with the principal instruments and methods used in plane, topographical, and other forms of surveying. Levels will be run, surveys made, notes plotted and areas computed. Students will have practice in determining the true meridian and latitude, by observations of the north star and of the sun.

The surveying equipment consists of a surveyor's compass, two transits, one of which has a gradienter and solar attachments, engineer's level, plane table, aneroid barometer, hand level and clinometer, optical square, pantograph, chains, tapes, leveling rods, poles, pins, etc. A current meter, hook gauge, and other instruments are available for work in hydraulics.

An excellent department library, containing standard works on subjects pertaining to the engineering professions, is accessible to students.

*Thesis.*—As a condition of graduation, each senior in the engineering course must prepare an acceptable thesis, which will remain the property of the college.

*Deposits.*—Students taking any of the practice work (exclusive of Chemistry) in the Engineering Course, will be required to deposit at the beginning of the work each year five dollars, to cover breakage or damage, and to make additional deposits at any time it becomes necessary to meet the expenses so caused. At the end of the year or on completion of the work, the amount not forfeited will be returned. For fees for the Chemical Course, see the description of the Chemical Department.

## Political and Economic Science

PROFESSOR SANDERS

1. *Political Economy*.—The subject, an exposition of the general principles of economics, will be developed, in the main, by means of assigned readings and oral discussions, with occasional lectures. Davenport's "Outlines of Economic Theory" will be the handbook used. Collateral readings on special topics will be assigned to the several members of the class, upon which they will be required to report.

48 hours; Winter; College Hall, Room A.

2. *Outlines of American Law*.—Using Walker's "American Law" as a handbook, the main outlines of American law will be presented, with special attention to such subjects—contracts, for instance—as are likely to be of practical importance in life to any man or woman making his or her way in the world. In introducing the subject, an effort will be made to show our legal system in its proper historic setting. The subject will be presented by means of assigned readings, comment and discussion. This is an elective course.

60 hours; Fall, College Hall, Room A.

*History of Civilization* (See History 5, 6, 7).—This course (which includes all the required work in Political Science) is continued throughout the Senior year, the class meeting five times a week. In it the difficult attempt is made to present an outline of the progress of human culture from the earliest times to the present day, considering (1) the economic life of man, his (2) political and (3) religious institutions, and (4) the development of the human mind as it shows itself in philosophy and pure science; paying careful attention throughout to the useful and fine arts (architectural, plastic, pictorial, and literary) in and through which man's attainments and aspirations have found expression. The subject is developed by means of lectures, assigned readings, written reports, and oral discussions.

120 hours; Fall, Winter, Spring, College Hall, Room A.

## Spanish

MR. SUTHERLAND

Two years work in Spanish is required of all students who do not elect Latin, and a third year is elective. For the Engineering students the prescribed work comes in the Senior Preparatory, or Sub-Freshman, and Freshman years; for other students, in the Freshman and Sophomore years.

The two years of prescribed work are designated Spanish 1, 2, and 3, and Spanish 4, 5, and 6. The elective courses are designated Spanish 7, 8, and 9. Spanish 8 and 9 are especially designed to train the student in a thorough knowledge of the usages of commercial Spanish.

Situated, as this College is, near the border of the Republic of Mexico, with Spanish in common use among a majority of our people, the opportunity here afforded to acquire a working knowledge of this language is certainly excellent, and should be improved by all who expect to enter upon any field of labor among the Spanish-speaking people.

## Department of Music

MRS. FRENGER

Arrangements have been made so that all students who desire to take either instrumental or vocal music can do so in a department that is self-supporting but that is under the general control of the president and faculty of the college.

Instrumental music is at present confined to the piano and organ, and a strictly classical course will be taught, all lessons being based on thorough technical exercises.

A normal course, for those desiring to prepare themselves for teachers, will include elementary harmony instruction.

Pupils will be received for both private and class instruction. Three pianos will be placed at the College and the Women's Hall for the benefit of pupils.

Fees, 75 cents and \$1.00 a lesson.

## Department of Stenography

MR. LESTER, Principal  
PROFESSOR BARKER  
MISS MACGREGOR

To meet the demand for instruction in stenography and typewriting, the above department is maintained in the College. To avoid interference with the regular college work, the work of this department is kept distinct, with certain requirements and a definite course of study.

*Requirements for Admission.*—For entrance to the course in English Stenography, students must be at least sixteen years of age, and have completed the work required to enter the Freshman class. Graduates of any commissioned high school in the Territory will be admitted without examination. All other applicants will be examined unless able to show that they have completed the required work. For entrance to the course in Spanish stenography, students must have completed the work required in the course in English stenography, or its equivalent, and the work of the Sophomore class in Spanish, or its equivalent.

No guarantee is given to any student pursuing these courses that he will secure a position upon completion thereof. There is, however, little doubt that any student satisfactorily completing a required course will be able to take a position, and no competent graduate of the department has yet failed to do so.

*Equipment.*—The department is equipped with eight typewriters,—Remington and Smith Premier machines. There are also the necessary appliances for the required work under office practice.

It is important that students enter this department promptly at the beginning of the courses. It is seldom that one who enters late is able to complete the required work satisfactorily. No provision can be made for commencing the work of a course at any other time than as provided. The courses of study are as follows:

A COURSE IN ENGLISH STENOGRAPHY

FALL TERM		WINTER TERM		SPRING TERM	
Stenography 1	10 hrs.	Stenography 2	10 hrs.	Stenography 3	10 hrs.
Typewriting 1	5 "	Typewriting 2	5 "	Typewriting 3	5 "
English 7	5 "	English 8	5 "	Office Practice	5 "
				English 9	5 "

A COURSE IN SPANISH STENOGRAPHY

WINTER TERM		SPRING TERM	
Span. Stenog. (6)	4 hrs.	Span. Stenog. (7)	4 hrs.
Adv. Stenog. (4)	1 "	Adv. Stenog. (5)	1 "
Commer. Span. (8)	5 "	Commer. Span. (9)	5 "
Typewriting 4	5 "	Typewriting 5	5 "

*Stenography.*—Stenography 1, in the first term of this course, is elementary in character, being a thorough study of the principles of shorthand. Stenography 2, in the second term, covers word signs and outline drill; and, in the third term, Stenography 3 consists of advance grade work, introducing a good deal of business and other dictation.

Text-books: Graham's Standard Phonography, revised edition; Graham's First and Second Readers and Intercolumn Reporting.

*Typewriting.*—This work covers fingering, touch, copying, letter-writing, legal and commercial forms, typewriting from dictation, mechanism and care of the machine, speed exercises, and transcription from shorthand notes. The four-finger touch method is used with blank key-board. Work absolutely free from errors is required. Opportunity is afforded students for work on both single and double key-board machines.

Text-book: Torrey's Practical Typewriting.

*Office Practice.*—This work, occurring in the third term, covers letter-writing, indexing and filing, proof-reading, duplicating and manifolded. A small charge is made for material used.

The experience of the past years has shown conclusively that a strong and growing demand exists for competent English-Spanish stenographers. The conditions existing in this locality and institution are so favorable for work in English-Spanish stenography that they may be said to be almost unique. The calls upon this College for such stenographers



during the past few years have far exceeded the supply; although these calls come principally from Mexico, there is a growing demand in the United States and the newly acquired Spanish-speaking possessions, and it is believed that the business opportunities open to competent English-Spanish stenographers are most desirable.

In view of the above facts, a short course in Spanish stenography, running through the second and third terms only, is provided. As will be seen from the requirements for admission, students entering the course are presumed to have a sufficient knowledge of English stenography and of the Spanish language. Students who may require to give additional time to Spanish, can, during the first term, take regular work in that subject, (Spanish 7).

*Stenography.*—Stenography 4 and 5 in this course is advanced work in English stenography, and consists of rapid dictation and business forms. Stenography 6 and 7 is the work in Spanish stenography, during which the principles of the text-book used are first gone over, followed by work in Spanish dictation.

Text-book: Lester & Barker's English-Spanish Phonography.

*Typewriting.*—Typewriting 4 and 5 is principally English and Spanish transcription work, with such advanced work as the time allotted will permit.

## The Preparatory Department

MR. LARKIN, Principal  
MISS COMBS  
MISS THORNTON  
MRS. BROWN

In planning the work of the college, we have been obliged to recognize that in the territory of New Mexico, with its vast extent and scattered population, the opportunities for secondary instruction are very meagre; but unfortunately this is not the whole truth. A considerable number of the citizens of the

territory have not at home any school opportunities for their children, and a great proportion of the schools of the territory do not pretend to carry their pupils beyond the most elementary stage of instruction; while many of those that do, nominally, the work of the higher grades of the common school, do it so poorly that their pupils are wholly unprepared to do successful work in high school, or even upper grammar, grades.

To meet the needs, therefore, of a large number of the youth of the territory who earnestly desire to avail themselves of the educational opportunities afforded by the college, but who are unprepared to enter its classes, a preparatory department is carried on in connection with the institution, the work of which begins at a point where the work of the public schools, except in the larger towns, usually breaks down.

Besides its regular classes, there is a special class designed to meet the needs of those persons of somewhat mature age who, through lack of early opportunities, are not prepared to enter the regular collegiate or preparatory classes, but whose maturity of mind enables them to make more rapid progress than can be made in the regular preparatory classes; and of those Spanish-speaking students (still a large element in our population) whose educational qualifications would admit them to a regular class if their command of English were greater. The course of study for this class cannot be definitely outlined. Each pupil, however, will be prepared as quickly as possible to enter a regular class, and tentative promotions will be made at any time upon the recommendation of the teacher in charge.

For admission to the special class candidates must be at least sixteen years of age or must possess all the requirements for admission to a regular class except a sufficient knowledge of the English language.

For admission to the lowest regular (C) class of the preparatory department candidates must give satisfactory evidence of having completed work as follows:—

1. Arithmetic,—an equivalent of the work covered by

White's Complete Arithmetic to Common Fractions (p. 47); 2. Language,—Elementary Language Work; 3. Geography,—an equivalent of the work covered by Mauray's Elementary Geography; 4. Reading,—an equivalent of the work covered by McGuffey's Third Reader; 5. Spelling and Writing,—an elementary knowledge of these subjects.

For entrance to the higher classes candidates must give satisfactory evidence of having completed the work of grades below the class they seek to enter.

Strict adherence to these requirements will be enforced.

A system of manual training was partially introduced into the work of this department at the beginning of the past year with considerable success. It is expected that the complete system will be used during the coming year. It will then include free-hand drawing and designing, clay modeling, and wood carving; and some good results are expected. Some informal work will be done, also, in vocal music.

A plan of self-government has been in operation during a portion of the past year, which has, we believe, aided to quite an extent the development of those qualities necessary to good citizenship. This plan, as improved in the light of our experience, will be followed during the coming year.

# Course of Study of the Preparatory Department

## ADVANCED DIVISION

### *Senior Preparatory or "Sub-Freshman," Class*

FIRST TERM	SECOND TERM	THIRD TERM
Algebra, 5 General History, 4 English, 2 Latin (optional with Spanish for Engineering Students), 5 Elementary Chemistry, 4	Algebra, 5 General History, 4 English, 2 Latin or Spanish, 5 Free-hand Drawing, 2 L. Wood-working Tools and Elements of Construction, 1 and Carpentry, 4 L., or Domestic Economy, 6 L.	Algebra, 5 General History, 4 English, 2 Latin or Spanish, 5 Free-hand Drawing, 2 L. Wood-working Tools and Elements of Construction, 1 and Wood Turning, 4 L., or Domestic Economy, 6 L.

\* NOTE: The Senior Preparatory Class is taught by the College instructors, not by the teachers of the Preparatory Department, and the students are under the immediate jurisdiction of the College faculty, instead of under that of the principal of the Preparatory Department.

*Junior Preparatory Class*

First Half-year	Second Half-Year
Algebra	Algebra
Grammar and Composition	Grammar and Composition
Arithmetic	Arithmetic
Civics	Physical Geography
Physics	Physiology
Manual Training	Manual Training

## ELEMENTARY DIVISION

<i>A Class</i>	<i>B Class</i>
Arithmetic	Arithmetic
Grammar and Composition	Grammar and Composition
United States History	Geography
Reading	Reading
Spelling	Spelling
Writing	Writing
Manual Training	Manual Training

<i>C Class</i>	<i>Special Class</i>
Arithmetic	The course of study for this class cannot be definitely outlined, but the work will be such as to prepare students for a regular class as quickly as possible.
Grammar	
Geography	
Reading	
Spelling	
Writing	
Manual Training	

NOTE: During the year 1899-1900, the Senior Preparatory class was known as the Sub Freshman class, the Junior Preparatory class was called the A class, the A class of the above statement was called the B class, and similarly B and C classes as described above were known respectively as the C and D classes. In the catalogue of students at the end of this book, however, the designations of classes is made to conform to the schedule presented above.

# Material Equipment

## THE MAIN BUILDING, OR COLLEGE HALL

The main building is a fine brick structure of two stories and basement. It is trimmed with stone and has a very heavy stone foundation. It is well built, nicely finished, and cost about \$25,000. It contains thirteen rooms, all of which are furnished and in constant use. The building is well supplied with gas and water. On the first floor are the library and the president's and the registrar's offices, as well as a number of recitation rooms. On the second floor, besides several class rooms, is McFie Hall, which is used for class exercises, lectures, and similar purposes, and will seat a large audience.

### *The Library*

The library and reading room is of fair size. At the beginning of this academic year the library contained about 4000 bound volumes, and a very large number of pamphlets; including good dictionaries, encyclopaedias, and the more necessary books of reference, in addition to the numerous scientific works used by the special departments. During the present year about three thousand dollars worth of new books will have been added.

The following periodicals are either on the desks of the reading room, or in the offices of the special departments, and are accessible to students:—

American Florist, American Ariculturist, American Chemical Journal, Analyst, American Machinist, American Naturalist, Atlantic Monthly, Business, Bulletin Torrey Botanical Club, Botanical Gazette, Catholic World, Chemical News, Chicago Tribune, Century, Cosmopolitan, Canadian Entomologist, Cassier's Magazine, Engineering News, Entomological News, Educational Review, Electrical World, Engineering and Mining Journal, Field and Farm (Denver), Forum, Foundry, Gardening, Harper's Weekly, Harper's Monthly Magazine,



Journal American Chemical Society, Journal London Chemical Society, Journal Association Engineering Societies, Journal of Education, Journal of New York Entomological Society, Kew Bulletin (Royal Gardens), Ladies' Home Journal, Mathematical Gazette, McClure's Magazine, Mining and Scientific Press, North American Review, Outlook, Pacific Rural Press, Phonographic World, Psyche, Popular Astronomy, Public Opinion, Rural New Yorker, Review of Reviews, Scientific American, Scientific American Supplement, Science, Scribner's Magazine, Transactions American Entomological Society, Werner's, Voice Magazine, Youths' Companion, New York Herald.

The following newspapers are furnished gratuitously by the publishers: The New Mexico Collegian (college paper), The Socorro Chieftain, The Rio Grande Republican, The Dona Ana County Republican, El Labrador, The New York Weekly Tribune, The Baltimore Weekly Sun.

Students have access also to the numerous agricultural and horticultural papers which are kindly furnished by the publishers to the Experiment Station Library in exchange for the Station Bulletins.

#### SCIENCE HALL

This is a large two-story brick building, situated to the north of the Main building. It contains eleven large rooms, and five smaller ones, besides large hallways. The lower floor is used mainly by the chemical department, while the upper is occupied by the departments of zoology, entomology, botany, and geology. The rooms are fitted up with new furniture specially adapted for their several purposes, and contain a large quantity of valuable apparatus belonging to the different departments. In this building the classes in zoology, geology, botany, chemistry, and assaying, are taught, and the station work in chemistry and biology is carried on.

#### ENGINEERING BUILDINGS

These buildings, two in number, are located south of the Main building. They comprise, besides two large recitation rooms and hall, commodious rooms for wood work, machine

work, foundry, and blacksmithing, an electric light plant, and a 40-horse power steam plant. These buildings are well equipped for Engineering work.

#### WOMEN'S HALL

This is a brick building, situated on the College Farm. It contains on the first floor a large dining hall, a large parlor, a smaller reception room, the matron's room, a kitchen, etc., and upstairs there are eleven well lighted and ventilated sleeping rooms, all nicely furnished. About thirty can be accommodated in the building.

#### OTHER BUILDINGS

Back of the Main building are the feed rooms and horse sheds. These are for the horses of the students and professors. The charge for their use is 25 cents a term, which is sufficient to keep them clean and in order.

Below the Main building is a pump house with engine and all other necessary machinery for pumping water from a system of six driven wells for the irrigation of the campus, which is much higher than the ditches which irrigate the farm land. This plant cost about \$2,500.

An adobe Farm building erected at a cost of about \$2,000 is located near the center of the farm. The Greenhouse and the sheds for the storing of farm implements and machinery are located near the Farm building. An adobe corral has recently been added to the farm equipment. Before the end of the year 1900-1901 it is hoped that there will be a Men's Hall similar to the Women's Hall.

## General Information

The College of Agriculture and Mechanic Arts offers a great deal to the young people of New Mexico. Every effort will be made to acquaint the people of the whole Territory with its purpose and work. Its courses of study are now equal to those of similar colleges in most of the older states. Students can now get a very thorough training here in any of the leading lines of practical education. New schools generally make greater efforts than the older ones, and the energy put forth and the instruction given are often superior. There are a great number of students sent from various parts of the Territory each year to eastern colleges. We ask parents who do this, to investigate this college; and we believe if they will do so, it will get a share of their patronage, and that our people will manifest, in an increasing degree, their appreciation of the bounty of the United States and of the Territory here dispensed. We know that this College is better fitted to do good work than some of the eastern schools patronized by our people.

Mesilla Park, N. M., is the postoffice and also the general freight and express office of the college.

There is now a good elementary public school at Mesilla Park, the course of study in which connects with that of the preparatory department of the college; so that parents who desire to live in the neighborhood of the college for the sake of giving their older children its educational advantages, will also have at hand a good school for their younger children.

Strangers will find it more convenient to stop at Las Cruces, and go temporarily to some hotel. They should then report to the president, who will assist them in finding a boarding place.

*Students should be on hand the first day of the term. The necessity of this is too seldom realized. New students and those desiring re-examination should report on the day named for this work.*

### FELLOWSHIPS

The board of regents has determined to establish one or more fellowships, of the annual value of \$300.00, open to graduates of the college and, in default of competent graduates who have specialized in the particular line of work required of the fellow, to graduates of other colleges. These fellowships will be tenable for one or two years, but not for a longer period, and will be awarded to promising graduates who desire to pursue their studies in one or more lines beyond the undergraduate curriculum, and who are willing and able to devote half of their time to assisting in the work of one of the departments of the college. The appointment will be made upon the joint recommendation of the head of the department in which the fellow is to serve and of the president of the college. A fellow will not be permitted to carry more than two full courses of study, without the express permission of the head of his department and the president of the college. The first of the fellowships will be available in 1901.

### THE PRESIDENT'S PRIZES

The students who shall have the highest standing for the year 1900-1901 in the Freshman, Sophomore, and Junior classes will receive a medal from the president of the college on commencement day, 1901, and a scholarship for the succeeding year (*i. e.*, all their college fees will be paid by the donor of the medal).

That student of the Preparatory Department who shall have the highest standing in the Senior Preparatory class will receive a similar scholarship for the Freshman year of his college course.

### FEES

Entrance fee, each year, for all students.....	\$5.00
Deposit fee     "     "     "     "     ".....	2.50
Students in Chemistry, deposit.....	5.00
Students in Engineering, deposit.....	5.00
Students using horse stalls, per term.....	.25
Students not citizens of the United States, per term.....	\$17, or \$50 per year.

## TEXT BOOKS

Text-books are furnished by the college. They will either be sold to the student at cost, or lent. Students are required to deposit \$2.50 in advance, to secure the proper care of college property and the prompt return of books borrowed. At the close of the year, or when the student withdraws, this deposit is returned unless damage has been done to the books or other college property. When this is the case the damage is assessed against the student, and any balance remaining from his deposit is returned.

This deposit may be increased with students who are notoriously careless. Students who are able should purchase their books. Many of them will be needed after leaving school, and they can be made to form the nucleus of a private library, which every student should be encouraged to collect.

## STATIONERY

As the college is nearly three miles distant from any store dealing in stationery, it has been found necessary for the accommodation of students to carry at the college a small line of articles, such as paper, pencils, pens, etc., which are sold to students, for cash only, at a small profit.

## BOARDING

Although the college, as such, can do nothing towards furnishing board and rooms for men, the accommodations for all classes of students are becoming quite varied and ample. the college has attracted to its immediate vicinity private families, many of whom accommodate some students with board. The price for board, room, lights, etc., in families, varies from \$16 to \$25 per month; table board in families about \$15 per month. Not far from the College campus are cottages for rent. These are usually occupied by families who have moved in and taken up temporary residence for the purpose of educating their children. This is a very satisfactory solution of the boarding problem.

A boarding club for young men—a private enterprise,

conducted by Mr. Charles L. Post, address, Mesilla Park,—has been established. It is under the supervision of the Faculty. The building is sufficient to room and board about thirty students. Table board is also furnished to some who do not room in the building. So far as expenses are concerned, it is conducted on the co-operative plan. Rooms are furnished with study-tables; but students are expected to furnish their own bedsteads or cots, bedding, towels, etc. Rooms, however, will be fully furnished for those who desire it. The food is abundant, healthful and well-served. The cost to each boarder during the past year has averaged about \$12.75 per month. During the coming year, Mr. Post, who is a graduate of this college, will spend two hours each evening instructing those who wish to make up back work.

#### THE WOMEN'S HALL

The Women's Hall, situated on the College farm, will accommodate about thirty students. The price of board per calendar month, with room, light, heat, and the washing of a dozen pieces including house linen, is \$17.00 when two young ladies occupy a room, and \$16.00 when there are three in a room, payable in advance on the first of each month. The rooms are comfortably furnished, but each student must provide comforts, blankets, sheets, pillow slips, towels, napkins, napkin ring, and two laundry bags. The student's name must be plainly marked on all the pieces.

The students are under the general supervision of the faculty, and in charge of the matron.

For further particulars apply to the matron.

#### ESTIMATE OF NECESSARY EXPENSES

Various college incidentals.....	\$ 10.00...	\$ 10.00
Nine months' board and lodging @ \$12 to \$18.	108.00 to	162.00
Laundry, per month @ \$1.00.....	9.00...	9.00
	<hr/>	<hr/>
	\$127.00 to	\$181.00

#### PAID LABOR

There is a considerable amount of labor on the farm, in



the shops, and in the laboratories, that can be performed by students; and the policy will be to give it to students rather than to others. Some students have been able to earn enough during the past year to pay their expenses; but those doing so have had constant employment in some subordinate position. The College cannot undertake to furnish work for all students who wish it, or need it, in anything like sufficient amount to pay expenses; and even if it could, the student's time is needed chiefly for study, recitation, and practice. Still, many worthy and industrious students pay a considerable part of their expenses by labor. Preference is given to those who are most trustworthy and meritorious, and who are regular and punctual in attendance, and correct in deportment. This labor is paid for at the rate of from  $7\frac{1}{2}$  to 20 cents per hour; but the faculty reserves the right to limit the amount of work any student may do.

#### RELIGION

All students will be trained in the principles of morality, but no sectarian teachings will be tolerated in the college. Entire freedom of choice is given the students in selecting the church they will attend. Services are held at the following churches every Sunday: Roman Catholic, Presbyterian, and Methodist; and occasional services are conducted by the Baptists and Episcopalians. At the Presbyterian church are held meetings of the Young People's Society of Christian Endeavor. With the Methodist church is connected the Epworth League. The Young Men's Christian Association of the College is about two years old now, and has, with the Young Women's Christian Association, which was organized a little later, made encouraging progress. These Associations are wholly voluntary and aside from the College curriculum. The meetings are held in the College building every Sunday afternoon, and are joint twice a month.

#### DISCIPLINE AND GOVERNMENT

It should be impressed upon the youth of New Mexico that by the creation of the College of Agriculture and Me-

chanic Arts there has been provided for them the fullest and best opportunities to secure a practical education. Students who enjoy the advantages here offered, should realize that to forfeit these privileges on account of their misuse or abuse is a matter of the most serious concern to them. No elaborate code for the conduct of students is prescribed. The college rules are mainly for the purpose of facilitating the college business. As regards behavior, students are expected to conduct themselves as ladies and gentlemen. If, after a fair trial, the influence of any student is found to be detrimental to scholarship, morals, or good order, dismissal will follow.

During the year 1899-1900, the students have been encouraged to take an active part in the administration of the college. The student body is organized, and there is a Student Conference Committee consisting of representatives from the United Student Body and from the Faculty. This committee discusses informally all matters of student concern, whether proposed for discussion by the faculty or by the students, and recommends to the Faculty and to the United Student Body such lines of action as seem to it to be wise. In matters of discipline the action proposed by the United Student Body is generally taken by the faculty.

### College Rules

As already stated, it is the policy of the faculty of this institution to deal with students in the most liberal manner possible. It is assumed that college students, in an institution of this character are of sufficient age and advancement to know how to conduct themselves properly as ladies and gentlemen. In view of this policy this institution has no written rules relating to the conduct of students. Any violation of the usually accepted code of proper conduct is dealt with as the particular case may demand.

In order that students may know how to attend to the business requirements of the institution, in regard to their

studies, the library, college organizations, etc., quite a full list of rules of procedure are given below. These rules, while designed primarily for College students, apply, in many instances, to students of the Preparatory Department as well. In all special cases, the Preparatory Department has its own rules.

## A

*Matriculation, etc.*

1. A student when first entering college, or at the first term of any subsequent year, must present himself

TO THE PRESIDENT,

who fills out the student's "admission card" and sends student with a "term assignment card"

TO THE COURSE OF STUDY COMMITTEE,

which assigns studies, completes the "term card," and issues class cards to student, who goes

TO THE REGISTRAR,

shows him the class cards, pays fees called for by his courses, takes receipt, and then reports

TO THE INSTRUCTORS,

giving the Instructor the class card and showing him his receipt. If the receipts are satisfactory, the Instructor gives the student an order for textbooks, etc., and then assigns the lesson. The student then goes

TO THE LIBRARIAN,

and, showing her the book order, filled and signed by the several Instructors, gets books, and surrenders order to the Librarian.

2. At the beginning of the second and third terms, a college student who has previously entered will procure a term assignment card from the *Registrar*, who will fill out the personal part of the card before giving it to the student; and the student will then go to the *Course of Study Committee*, and the procedure will from this point be the same as at the beginning of the year, except that the student need

not go to the Registrar again unless he is assigned to a course which requires the payment of a special fee or deposit.

3. *Students* must preserve the receipts they receive at the beginning of the year, and show them to their instructors at the beginning of each term as a condition of admission to class. If the receipt is lost, a duplicate may be obtained from the Registrar upon payment of a fee of 10 cents.
4. *An Instructor* must not admit a student to his class, even though he have a class card, unless he shows the Registrar's receipt or receipts for all fees and deposits required of members of the College taking the course in question.

## B

### *Grading, Examination, and Classification of Students*

- 1.—The system of grading is on a scale of 100.
- 2.—At the end of each term, unless special action be taken by the faculty to the contrary, examinations are held in all subjects, or parts of subjects, taught during that term.
- 3.—In making up the term grade in any subject, in case an examination has been held, the average daily grade is added to the examination grade and the sum divided by two. In case no examination is held at the end of a term, the average daily grade is taken as the final mark for the term.
- 4.—The method of determining the average daily grade, except in the matter of absences, is left to the instructor in charge of the class.
- 5.—In determining the average daily grade, an amount is deducted for unexcused absences proportional to the amount of work missed; unless the absence occurs in the first or last week of the term, or in the week preceding or succeeding a vacation, in which case it counts double. Excused absences count the same as those unexcused, unless the work missed is made up to the satisfaction of the instructor in charge.
- 6.—Any student receiving an average daily grade of 85, or

over, in any subject, may, at the discretion of the instructor in charge, have this mark taken as the final grade for the term, in that subject, without having to take an examination.

7.—If a student receive a final term grade of 70 or over, in any subject, he shall be passed; otherwise he shall be conditioned.

8.—(a) A student conditioned in any subject has a chance to remove his condition by taking a re-examination in the subject. If he fail in the re-examination, or fail to take the same at the specified time, credit for the work will only be given after he has repeated the subject in class and made a passing grade on the same.

(b) All re-examinations for failures in entrance examinations, or in studies during any year except the Senior, take place in the first week of the first term of the next year.

(c). All re-examinations for failures during the first two terms of the Senior year must occur before the beginning of the third term of that year.

9. Whenever a student, by action of the faculty, is put into a lower class, he may be required to repeat all the studies of that class, whether he has previously passed in them or not.

10. If a student, at the end of any term, fail in every subject, or in every subject save one, he may be at once dropped to a lower class, or from college, as the faculty may decide.

11. No student taking a regular course is allowed to take up any subject in that course until he has passed in all preceding work necessary to fit him for that subject. Neither will such a student be excused from any prescribed work in that course except by special action of the faculty.

12. No special student is allowed to enter any class unless, in the opinion of the instructor in charge, he is thoroughly prepared in all necessary preceding branches.

13. In case of any conflict in the course of study, the higher subject shall give way to the lower.

14. Regular college students are classified as Freshmen, Sophomores, Juniors, or Seniors, according to the number of



hours work they have completed. Thus, if the number of hours required per week is 20, the number of weeks per year 36, and the number of years 4, then the minimum number of hours required for graduation would be  $20 \times 36 \times 4 = 2880$ . In this case, a student would be classified as a Freshman until he had completed 720 hours, and thereafter as a Sophomore until he had completed 1440 hours, etc.

In the above scheme, two hours of drawing, laboratory work, shop practice, or field work, are counted as equivalent to one hour of recitation.

15.—(a) No grade from another school will be accepted as an equivalent of work in this institution unless said school ranks as high as this one, and then only by special action of the faculty.

(b) In all other cases, where a student desires credit for work done elsewhere, the same will only be given after the student passes a satisfactory examination in this institution.

16.—A record is kept of the work of each student, and at the end of each term, reports showing the grades &c. of the different students, are sent to their parents or guardians.

## C

### *Graduation*

1.—Seniors having conditions at the beginning of the third term of the Senior year will not be considered candidates for a degree.

2.—A student, in order to graduate, must have completed the full amount of work included in one of the college courses of study, or an equivalent of the same which has been accepted by the faculty

3.—Each candidate for graduation is required to prepare a thesis, which shall be passed upon by a committee consisting of the head of the department in which the work was done, the professor of English, and the president.

4.—Any graduate may be required by the faculty to give an exercise on commencement day, consisting of an oration or an extract from or abstract of his thesis.



5.—Subjects for theses must be presented to the faculty for approval not later than the end of the second term of the Senior year.

6.—All theses must be handed in for inspection by the committee referred to under section 3, before the beginning of the Senior vacation, and the finished thesis must be filed with the Registrar not later than the beginning of the second week of the Senior vacation.

7.—A thesis, in order to be finally accepted, must be clearly written, or type-written, on good linen paper, size 8x10½ inches, bound, and a copy delivered to the Registrar for permanent preservation.

8.—Seniors are given a vacation during commencement week and the week immediately preceding.

#### D

##### *Absence and Tardiness*

1.—A male student who is absent or tardy must state the reason for such absence or tardiness, to the different instructors concerned, the first time he meets said instructors in class thereafter. If no such statement is rendered, the student will be marked zero for the work missed.

2.—A female student must, in a similar manner, present to the different instructors concerned, not later than the second time she meets said instructors in class thereafter, a written statement from the dean of women as to whether an absence or tardiness has been satisfactorily explained.

3.—Any student who is absent from a regular examination at which he should be present, shall be required to present to the instructor in charge a satisfactory excuse for the same, in default of which said student shall at once be suspended from college.

#### E

##### *The Library*

1.—Subject to the following rules, books and periodicals may be drawn from the library by making the necessary application to the librarian.

2.—(a) Temporary assignment of library books may be made to the different departments of the institution, by the librarian, subject to the approval of the president. Books so assigned may be recalled at any time.

(b) Indefinite assignment of library books and periodicals may be made to the different departments by the library committee, subject to the approval of the faculty. Books and periodicals so assigned can only be recalled by faculty action.

3. No library book, unless in a department library, may be kept out for more than two weeks consecutively. For each day overtime a fine of three cents is imposed.

4. Encyclopædias and similar works of reference must not be taken out of the library, except by special permission of the librarian.

5.—(a) Current numbers of periodicals may not be kept out of the library longer than over night, except during the period from Friday evening to Monday morning. (b) The last seven issues of the dailies, the last four issues of the weeklies and the last two issues of the monthlies are considered current numbers.

6. Periodicals cannot be drawn sooner than one half hour before the library is closed.

7. Periodicals, other than current numbers, will be governed by the same rules as library books.

8. No book or periodical assigned to any department may be drawn without the expressed consent of the head of that department.

9. Fines will be imposed by the librarian for loss of, or unreasonable damage to, library books or periodicals.

## F

### *College Organizations*

1.—The public exercises of all societies, classes, athletic teams, or other organizations connected with the college, are subject in time, place and character, to the approval of the faculty. All rooms assigned for the use of societies, or other organizations, shall be occupied subject to the faculty's control.

2.—All societies, classes, athletic teams, or other organizations connected with the college, are required to notify the faculty in writing of all dates desired for public exercises. When possible, such notices shall be given at least two weeks before such exercises are to be given.

3.—The faculty reserves the right of passing upon the constitutions and by-laws, and all subsequent amendments to the same, of all societies organized in connection with the college.

## G

### *Miscellaneous*

1.—(a) Stalls are provided for the horses of officers and students who ride or drive to the college. These stalls are rented at the beginning of each term, twenty-five cents per term being charged for each single, and fifty cents per term for each double stall; the amount to be paid in advance.

(b). The members of the faculty and other officers, have first choice of stalls, and the Seniors, Juniors, Sophomores, Freshmen, students in the Stenography course, Preparatory students and Special students, have choice of the remainder in the order named.

2.—Carriages must be so arranged about the horse stalls that an open passage is left between the carriages and stalls, and horses must not be tied in places where they block the passage to the stalls.

3.—The first Friday in May is a holiday set apart for athletic sports, and is known as Field Day.

4.—No student who has failed in any subject of the preceding term shall be eligible to membership in any college team, and the faculty may, at any time, deprive a student whose college work is unsatisfactory of the privilege of taking part in any team or public athletic work.

5.—Smoking, or the carrying of lighted pipes, cigars, or cigarettes, is not permitted in or about any of the buildings of the college and experiment station.

## College Organizations

### *The United Student Body*

This is an organization of the students designed to promote "Self-government." Matters of importance concerning the conduct of students are brought to the attention of this body before final action is taken by the faculty. The power delegated to this organization is only advisory, yet its wishes are seldom disregarded. Although the United Student Body, as an organization, is still in its infancy, it is already recognized as a powerful factor in all college affairs. The members of the executive committee of the organization are elected each term and are as follows: President, vice-president, secretary and treasurer, and two delegates from each of the following classes: Senior, Junior, Sophomore, Freshmen, Stenography, and Sub-Freshmen, or Senior Preparatory. The officers for the present term are,

Frank Broyles.....	President
Minnie Newberry.....	Vice-President
E. E. Winter.....	Secretary and Treasurer

### *The Columbian Literary Society*

This society was organized October 25, 1891, under the name of Alpha Chi. In 1892 this was changed to Columbian, since which time the society has made steady and prosperous growth. Until about the middle of 1894-95 only men were admitted as members, but since that time women have had equal membership privileges. The object of the society is to promote and encourage conscientious and practical literary and musical work by readings, essays, papers, debates, vocal and instrumental music, and such other exercises as the committee on program may prescribe. Applicants for admission must be college students in good standing, and must pay an entrance fee of one dollar. Dues of fifty cents must be paid each succeeding term. Regular meetings are held on Friday afternoon of each week, and an evening meeting is

held on the second Friday of each month. Visitors are allowed during the literary part of meetings.

#### OFFICERS

Charles L. Post.....	President
Maude McFie.....	Vice-President
Isabelle Mordy.....	Recording Secretary
Helen Macgregor.....	Corresponding Secretary
J. S. Macgregor.....	Treasurer
Maie Sebben.....	Librarian
Mary Metcalfe.....	Critic
Theron Bennett.....	Vice-Critic
Theron Bennett.....	Marshal

#### *The Collegian*

The NEW MEXICO COLLEGIAN is published and managed by the Columbian Literary Society. It was founded in February, 1893, and has been published regularly since that time. Seven excellent Commencement numbers have been issued. It is an eight to twelve page journal and contains contributions from students, besides the matter usually found in college publications. It is issued monthly during the college year, and has a good circulation throughout the territory, and one which is constantly increasing.

The interest of students in the journal has grown considerably since it was founded, and it appears to be especially valued by those who leave college, serving as it does to keep them in close touch with the institution and with their college friends.

Except for the commencement number, the COLLEGIAN is self-supporting, and has every prospect of being a successful journal. It will be enlarged and improved in the future as the support may warrant. All work in connection with its publication is entirely gratuitous. The subscription price is one dollar per year.

#### STAFF

Charles L. Post.....	Editor-in-chief
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W. C. Meeker.....	Asst. Editor-in-chief
J. S. Macgregor.....	Business Manager
Theron Bennett.....	Local Editor
E. E. Winter.....	Athletic Editor
Maud McFie.....	Personal Editor
Helen Macgregor.....	Social Editor
Mary Metcalfe.....	Exchange Editor

*P. S. & W. E.*

This society was organized by some Freshman girls in 1896. P. S. & W. E. is the name by which the society is known, the real name being one of the secrets. It is purely literary and social, and the weekly meetings are devoted to sketches of historical characters, current events, debates, book reviews, and essays. Also much original work, such as story writing and impromptu speaking, is done. Once a month open meetings are held. The attendance increases with every meeting. The annual entertainments given by the society are very successful. The membership has increased somewhat since the organization, and is not limited now to the college proper.

The society has improved wonderfully in the last three years, and, though small, has made for itself a firm standing in college circles.

Election of officers occurs each term, and everything is done very systematically. Every young lady now in the society has at one time filled every office, so that each one is equally well fitted to occupy the same place when called upon. The officers are as follows:

Nora Newberry.....	President
Vivette Davis.....	Vice President
Marie Macgregor.....	Secretary and Treasurer
Elizabeth Coleman.....	Critic
Fannie French.....	Marshal
1. Minnie Newberry, }	.....Literary Committee
2. Maude McFie, }	
3. Marie Macgregor, }	



*Athletic Association*

The Athletic Association was organized in October, 1893, and since that time its growth has more than kept pace with that of the college at large. All the athletics in the institution are under the control of this Association. So far, football, baseball, basketball, and tennis have been the principal sports. Aside from these, there is an annual Field Day, when one or more gold medals are awarded to the winners of the different events. The Association is governed by a president, secretary and treasurer, and an executive board of eight members, all elected by the Association the second Monday of the first term of the collegiate year. The executive board has charge of all sports sanctioned by the Association, and also the levying of all assessments.

The officers for 1899-'00 are as follows:

## EXECUTIVE COMMITTEE

E. E. Winter.....	President
Carl Snow.....	Recording Secretary
J. S. Macgregor..	Treasurer and Manager of Field Day
Frank Broyles.....	Manager, Baseball
Minnie Newberry.....	Manager, Basketball
Manuel Otero	
Burt Stephens	

## OTHER OFFICERS.

Robert Metcalfe.....	Manager, Tennis
A. C. Tyson.....	Manager, Football

The football team and the basketball team of 1899-1900 hold the inter-collegiate championship of the Territory for the college.

*Y. M. C. A.*

The Y. M. C. A. was organized in May, 1898. The Association is in affiliation with the international committee of the Y. M. C. A., in New York city, and by virtue of this connection gains entrance to the globe-encircling organization, the World's Student Christian Federation. Weekly meetings are held

throughout the entire school year on Sunday afternoons, two of these meetings each month being in conjunction with the Y. W. C. A. During the greater part of the past year a weekly Bible class has been very successfully conducted under the auspices of these two Associations, taught by an efficient and experienced teacher, Professor Hadley. Although the fortunes of the Association are quite variable, its members feel assured that it fills a long felt want, and proves of untold benefit to the man who is desirous of cultivating and keeping warm his spiritual nature. The regular meetings of the Association are open to all men. The present officers are:

President.....W. C. Meeker  
Secretary.....R. T. Stinnett

*Y. W. C. A.*

The Y. W. C. A. was organized in 1898 with seven charter members. It was re-organized this year and has held devotional meetings at the college every Sunday afternoon. At the beginning of each year the Young Men's and Young Women's Christian Associations give a reception for the new students. The officers of the society for the spring term are:

Isabelle Mordy.....President  
Elizabeth Coleman.....Secretary and Treasurer

*Oratorical Association*

The Oratorical Association of the New Mexico College of Agriculture and Mechanic Arts was organized in March, 1899. The object of this organization is the promotion of oratorical interests in this college. The Association will hold one regular oratorical contest each year, and the successful competitor will be the representative of the college in the contest between the members of the Territorial Oratorical Association, with which the College Association is affiliated.

*Choral Club*

A Choral Club, under the directorship of Professor Wooton, has done good work during the year just past, and promises to

be one of the most helpful auxiliary organizations connected with the college.

*Mandolin and Guitar Club*

At the beginning of the year, a mandolin and guitar club, consisting of eight or ten members, was organized. This organization appeared before the public on several occasions, and, considering the new material that had to be worked up, made a very creditable showing. With the work that has already been done, the club should be much stronger next year. \

# Alumni

## OFFICERS OF THE ALUMNI ASSOCIATION

FOR 1899-1900;

FOR 1900-1901:

President.....	Alfred M. Holt	W. A. Sutherland
First Vice President..	Iva R. Mead	I. H. Stanley
Second “ “ ..	Lemuel C. McGrath	Elgin B. Holt
Secretary.....	Fabian Garcia	Fabian Garcia
Treasurer.....	R. R. Larkin	J. D. Tinsley

### CLASS OF 1894

Fabian Garcia, B. S., Assistant Professor of Horticulture and Horticulturist to the Exper. Sta., N. Mex. College of A. & M. Arts, Mesilla Park, N. Mex.

Mrs. Guy Herbert (née Williams), B. S., Housewife, Hondo, N. Mex.

R. Roy Larkin, B. S., Prin. Preparatory Dept., N. Mex. College of A. & M. Arts, Mesilla Park, N. Mex.

Lemuel C. McGrath, B. S., Merchant, Lordsburg, N. Mex.

Oscar C. Snow, B. S., Ranchman, Mesilla Park, N. Mex.

### CLASS OF 1895

Mrs. Clarence E. Rhodes (née Casad), B. S., Housewife, El Oro, D. F., Mex.

### CLASS OF 1896

Mae Gilmore, B. S., Teacher, Lower Peñasco, N. Mex.

Alfred M. Holt, M. S., Assistant Chemist, N. Mex. College of A. & M. Arts, Mesilla Park, N. Mex.

Albert H. Peterson, B. S., Mechanic, Denver, Colo.

Clarence E. Rhodes, B. S., with American Mining Co., El Oro, D. F., Mex.

### CLASS OF 1897

Joseph F. Bennett. Jr., M. S., Assistant in Physics, Geology and Botany, N. M. College of A. & M. Arts, Mesilla Park, N. M.

Elgin B. Holt, B. S., Cattleman, Graham, N. Mex.

Arthur E. Williams, B. S., Business Mgr., "Sacramento Chief,"  
Alamogordo, N. Mex.

CLASS OF 1898

Edwin E. Casey, B. S., U. S. V.,—Deceased 1898.

Duval G. Cravens, B. S., Supt. Public Instruction, Vega Baja,  
Porto Rico.

Charles E. Mead, B. S., Supt. Agricultural Experiment Sub  
Station, Aztec, N. Mex.

Iva R. Mead, B. S., Teacher, Public Schools, Las Cruces, N. M.

Isaac H. Stanley, B. S., Photographer, Pinos Altos, N. Mex.

William A. Sutherland, B. S., Instructor in Spanish and Latin,  
N. M. College of Agr. and Mech. Arts, Mesilla Park, N. M.

Lottie Sweet, B. S., Student, Central College, Lexington, Mo.

George M. Williams, B. S., Student, Leland Stanford, Jr. Uni-  
versity, Stanford, Cali.

CLASS OF 1899

Edward J. Coe, B. S. Engineer, Stanton, N. Mex.

Walter E. Holt, B. S., Cattleman, Graham, N. Mex.

John D. Tinsley, B. S., Professor of Soil Physics and Soil Phy-  
sicist and Meteorologist to the Exper. Sta., N. M. College  
of A. and M. Arts, Mesilla Park, N. M.

CLASS OF 1900

William Cory Meeker, B. S., Clifton, Arizona.

Charles Lewis Post, B. S., Graduate Student, N. M. College of  
A. and M. Arts, Mesilla Park, N. M.

Archie Bruce Sage, B. S., Assistant in Mechanical Engineer-  
ing, N. M. College of A. and M. Arts, Mesilla Park, N. M.

Halbert E. P. Thomas, B. S., Instructor in Physics, Chemistry,  
and Geology, New Mexico Normal School, Silver City,  
N. M.

# Catalogue of Students

## The College \*

Barber, Charles Melvin ( <i>Soph.</i> )	Mesilla
Bennett, Theron Catlin ( <i>F.</i> )	Pierce City, Mo.
Broyles, Richard Franklin ( <i>J.</i> )	Mesilla
Clark, William Wentworth ( <i>Sp.</i> )	Bland
Coleman, Elizabeth ( <i>Soph.</i> )	Mesilla Park
Danburg, Walter Malcom ( <i>F.</i> )	Las Cruces
Davis, Vivette ( <i>Soph.</i> )	El Paso, Texas
Ford, Fannie ( <i>F.</i> )	Las Cruces
Ford, Pinkie ( <i>J.</i> )	Las Cruces
Freeman, Bliss ( <i>F.</i> )	Anthony
French, Fannie ( <i>Soph.</i> )	Las Cruces
Laferriere, Arthur Alphonse ( <i>Sp.</i> )	Las Cruces
Llewellyn, Morgan ( <i>Sp.</i> )	Las Cruces
Macgregor, J. S. ( <i>J.</i> )	Mesilla Park
May, Ormeda ( <i>F.</i> )	Las Cruces
Meeker, William Cory ( <i>S.</i> )	Clifton, Ariz.
Metcalf, Mary T. ( <i>Sp.</i> )	Mangus Springs
Metcalf, Orrick Baylor ( <i>F.</i> )	" "
Metcalf, Robert James ( <i>F.</i> )	" "
Mordy, Isabelle ( <i>Sp.</i> )	Las Cruces
Mott, Rowena ( <i>F.</i> )	Las Cruces
McBeth, Bertha ( <i>Sp.</i> )	Monticello, Ind.
McFie, Maude Elizabeth ( <i>Soph.</i> )	Santa Fé
Nabours, Benjamin Franklin ( <i>F.</i> )	White Oaks
Nelson, Mae Elizabeth ( <i>Sp.</i> )	Tipton, Mo.
Newberry, Leah Nora ( <i>J.</i> )	Mesilla Park
Newberry, Minnie Wilson ( <i>J.</i> )	" "

\* Gr.—Graduate Student; S.—Senior; J.—Junior; Soph.—Sophomore; F.—Freshmen; Sp.—Special Student.

See College Rules, B 14, p. 72.



O'Keefe, Mary Ellen ( <i>Sp.</i> )	El Paso, Texas
Peet, Ethel Nancy ( <i>Sp.</i> )	Monticello, Ind.
Porter, Wilmatte, A. B. ( <i>Gr.</i> )	East Las Vegas
Post, Charles Lewis ( <i>S.</i> )	Mesilla Park
Sage, Archie Bruce ( <i>S.</i> )	" "
Sanchez, Alfredo Marcos ( <i>J.</i> )	Mesilla
Sebben, Mae La Salle ( <i>Sp.</i> )	East Las Vegas
Snow, Carl ( <i>F.</i> )	Victoria
Steel, Matthew ( <i>J.</i> )	Las Cruces
Stephens, Burton Triolous ( <i>F.</i> )	Pomeroy, Wash.
Stinnett, Russell Tamah ( <i>F.</i> )	Bells, Va.
Thomas, Halbert E. P. ( <i>S.</i> )	Chicago, Ill.
Thompson, Cayetano ( <i>J.</i> )	Mimbres
Wallace, Lunah Ward ( <i>Soph.</i> )	Cloudcroft
Winter, Edward Ernest ( <i>Sp.</i> )	El Paso, Texas

### Stenography Department

Ames, Henry Philip	Las Cruces
Armijo, Dolores	" "
Blakesley, Fannie Elizabeth, B. L.	Topeka, Kan.
Bull, Walter Buckingham	Ivorton, Conn.
Clark, Frank Parker	Tularosa
Coleman, Bertie	Mesilla Park
French, Margaret	Las Cruces
Glidden, Ava Beatrice	Santa Fé
Hare, Francis Williams, B. S.	Auburn, Ala.
Kanen, Charles Frederick	Roswell
Mead, Victor Vail	Mesilla Park
Miller, John Oliver, B. S.	Denver, Colo.
McKenzie, Reginald Henry	Santa Fé
Newton, Cornelius Rector	Earlham
Otero, Nina	Santa Fé
Reid, John Rufus	San Antonio
Sutherland, Fannie Florence	Cerillos
Swope, Mary Craig	Santa Fé
Tyson, Allan Campbell	Las Cruces

## Preparatory Department \*

### *Advanced Division*

Bloodgood, Dean Ward Actly ( <i>Jr.</i> ) . . .	Kingston
Brunner, George ( <i>Jr.</i> ) . . . . .	El Paso, Texas
Carrera, Regina Mary ( <i>Sr.</i> ) . . . . .	Las Cruces
Casey, Clara Lillice ( <i>Jr.</i> ) . . . . .	" "
Coleman, Ruth ( <i>Sr.</i> ) . . . . .	Mesilla Park
Comfort, Myrta ( <i>Sr.</i> ) . . . . .	El Paso, Texas
Easley, Charles Ralph ( <i>Jr.</i> ) . . . . .	Santa Fé
Ford, Annis Bell ( <i>Jr.</i> ) . . . . .	Las Cruces
Foster, Flossie ( <i>Sr.</i> ) . . . . .	" "
Freeman, Anna May ( <i>Sr.</i> ) . . . . .	Anthony
Garrett, Dudley Poe ( <i>Jr.</i> ) . . . . .	Las Cruces
Hart, Reginald Henry ( <i>Jr.</i> ) . . . . .	El Paso, Texas
Higley, Pearl Carlyson ( <i>Sr.</i> ) . . . . .	Parral, Chihuahua, Mex.
Isaacks, Mary Caledonia ( <i>Sr.</i> ) . . . . .	Las Cruces
Kezer, Avery M. ( <i>Jr.</i> ) . . . . .	" "
Kezer, Grace Bell ( <i>Jr.</i> ) . . . . .	Las Cruces
Mead, Herbert Henry ( <i>Jr.</i> ) . . . . .	Mesilla Park
Moorhead, James Henry ( <i>Jr.</i> ) . . . . .	Denver, Colo.
Mordy, Grace McLean ( <i>Jr.</i> ) . . . . .	Las Cruces
Mordy, Josephine Gardiner ( <i>Jr.</i> ) . . . . .	" "
McLachlen, Malcolm Romain ( <i>Jr.</i> ) . . . . .	El Paso, Texas
Neal, Homer Herbert ( <i>Jr.</i> ) . . . . .	Mesilla Park
Newberry, Henry Clay ( <i>Jr.</i> ) . . . . .	" "
Newcomb, Bessie Simone ( <i>Jr.</i> ) . . . . .	Las Cruces
Otero, Manuel B. ( <i>Jr.</i> ) . . . . .	Santa Fé
Pelphrey, William ( <i>Sr.</i> ) . . . . .	Alamogordo
Poe, Oscar Leroy ( <i>Sr.</i> ) . . . . .	Mesilla Park
Quintero, José ( <i>Jr.</i> ) . . . . .	Mesilla
Ramirez, Rafael ( <i>Jr.</i> ) . . . . .	Las Cruces
Reush, Guy ( <i>Jr.</i> ) . . . . .	Earlham
Schenk, George Leo ( <i>Jr.</i> ) . . . . .	Las Cruces
Schenk, James J. ( <i>Jr.</i> ) . . . . .	" "
Stivers, Joseph William ( <i>Jr.</i> ) . . . . .	" "

\* See note on p. 60.

*Special Class*

Archuleta, Ysabel . . . . .	Mesilla
Ascarate, Frank Marcial . . . . .	Las Cruces
Baca, Caveza de, Florencio . . . . .	Santa Fé
Baird, Alonzo Eugene . . . . .	El Paso, Texas
Beasley, Sarah Evalyn . . . . .	Las Cruces
Brackett, Frederic Theodore . . . . .	Alamogordo
Carbajal, Anastacio . . . . .	Ysleta, Texas
Chavez, Jacobo . . . . .	San Antonio,
Díaz, Angel . . . . .	Chihuahua, Mexico
Enriquez, Benjamin . . . . .	" "
Enriquez, Eduardo . . . . .	" "
Esperon, Camilo . . . . .	" "
Falomir, Julio . . . . .	" "
Fountain, Albert J., Jr. . . . .	Mesilla
Gatlin, Jessie Lee . . . . .	Frisco
Gonzales, Alejandro . . . . .	Mapimi, Durango, Mexico
Gonzales, Jesus . . . . .	Mesilla Park
Gould, Thomas Jefferson . . . . .	Weed
Grijalbe, Marcos . . . . .	Arroyo Bonito
Hudson, Jasper Newton . . . . .	Frisco
Losoya, Hilario, Jr. . . . .	Guanaceví, Durango, Mexico
Lucero, Guadalupe . . . . .	Mesilla
Miller, Bernard . . . . .	Cliff
Montoya, Ricarte . . . . .	Socorro
Pagne, Ida . . . . .	Hillsboro
Ramirez, Juan . . . . .	Las Cruces
Reush, Bernard . . . . .	Earlham
Rhodes, John . . . . .	Doña Ana
Rhodes, Lula . . . . .	" "
Smith, Benjamin . . . . .	Bland
Walthal, William . . . . .	Tularosa

*Elementary Division*

Adams, Frederick (C) . . . . .	Las Cruces
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Archibald, Sara ( <i>C</i> )	El Paso, Texas
Ascarate, Nemecia ( <i>B</i> )	Las Cruces
Beasley, Albert Houston ( <i>C</i> )	" "
Beasley, Austin ( <i>B</i> )	" "
Bellina, Pearl Reynolds ( <i>A</i> )	Aguas Calientes, Mex.
Bennett, John Jacob ( <i>C</i> )	Mexico City, Mexico
Bodfish, Gertrude Rosamund ( <i>A</i> )	Victor, Colo.
Bull, Charles Henry ( <i>B</i> )	Mesilla
Carrera, Emile Philo ( <i>C</i> )	Las Cruces
Carrera, Linda ( <i>B</i> )	" "
Chavez, Manuel Ramon ( <i>B</i> )	Mesilla
Clark, Philip Dieter ( <i>B</i> )	Tularosa
Coleman, Dan ( <i>C</i> )	Mesilla Park
Crooks, William Festus ( <i>A</i> )	Trenton, Mo.
Dessauer, Philip Edward ( <i>C</i> )	Las Cruces
Dwire, Carroll Ray ( <i>B</i> )	Taos
Evans, Flora Lucille ( <i>C</i> )	Ysleta, Texas
Fall, Alexina ( <i>C</i> )	Las Cruces
Falomir, Manuel ( <i>C</i> )	Chihuahua, Mex.
Ford, Alice Bessie ( <i>C</i> )	Las Cruces
Ford, Lela Ray ( <i>C</i> )	" "
Forsythe, Beatrice Elizabeth ( <i>C</i> )	Winslow, Ariz.
Fountain, Catherine Mary ( <i>B</i> )	Mesilla
Freeman, John J. ( <i>B</i> )	Anthony
Frietz, George ( <i>B</i> )	Mesilla
Gilmore, Matt ( <i>A</i> )	Angus
Goodin, Frank Marion ( <i>A</i> )	White Oaks
Graham, Allen Givens ( <i>B</i> )	Las Cruces
Graham, Earl Addison ( <i>A</i> )	" "
Hammond, Laura Virginia ( <i>A</i> )	Wellsburg, W. Va.
Hanna, Charles Carroll ( <i>B</i> )	San Antonio
Hatton, Thurman Timbrook ( <i>C</i> )	Las Cruces
Heredia, Concepcion ( <i>C</i> )	Mexico City, Mex.
Hostetter, Cecil ( <i>A</i> )	Las Cruces
Hostetter, Hazel ( <i>A</i> )	" "
Isaacks, Coila Nancy ( <i>B</i> )	" "
Isaacks, Willie F. ( <i>A</i> .)	" "

Lapoint, Willie Peter ( <i>A</i> )	Las Cruces
Llewellyn, Frances Louise ( <i>A</i> )	" "
Llewellyn, Gladys ( <i>A</i> )	" "
Lucero, Francisco ( <i>C</i> )	Mesilla
Lucero, Juan B. ( <i>B</i> )	"
Lucero, Andres ( <i>B</i> )	"
Mackedon, Edward Josiah ( <i>C</i> )	San Pedro
Mackedon, John James ( <i>A</i> )	" "
Marrufo, Dolores ( <i>A</i> )	Las Cruces
Mead, Anita Limerick ( <i>B</i> )	Mesilla Park
Mills, Lloyd Frederick ( <i>C</i> )	Las Cruces
Mordy, Jessie Laura ( <i>C</i> )	" "
Morgan, James Victor ( <i>A</i> )	Rocky Ford, Colo.
McBeth, Marjorie ( <i>B</i> )	Monticello, Ind.
McLachlen, Bonnie Adele ( <i>A</i> )	El Paso, Texas
Nabours, Bessie Luella ( <i>A</i> )	White Oaks
Nabours, Myrtle Vance ( <i>C</i> )	" "
Neveres, Jesus F. ( <i>A</i> )	Las Cruces
Newcomb, Alice ( <i>C</i> )	" "
Newman, Mary Ellen ( <i>A</i> )	El Paso, Texas
Newman, Robert E. Lee ( <i>A</i> )	" "
Olinger, Robert ( <i>A</i> )	Mesilla Park
O'Rear, Archie ( <i>B</i> )	Magdalena
Poe, James Ralph ( <i>C</i> )	Mesilla Park
Potter, Adda ( <i>C</i> )	Mesilla
Potts, Burt ( <i>B</i> )	Las Cruces
Quintero, Fernando ( <i>C</i> )	" "
Ramirez, Tomas ( <i>C</i> )	" "
Rouault, Ernest Joseph ( <i>A</i> )	" "
Sampson, Irving Wilber ( <i>C</i> )	" "
Schenk, August, Jr., ( <i>A</i> )	" "
Scoggins, Beulah ( <i>A</i> )	" "
Steel, James Alexander ( <i>C</i> )	" "
Sutherland, Sidney McNeil ( <i>C</i> )	Cerillos
Van Lindt, Cherry ( <i>B</i> )	Silver City
Wade, Edward Clemens, Jr. ( <i>C</i> )	Las Cruces
Wakefield, Clara Bell ( <i>A</i> )	Chamborino

Wellgehausen, Julia ( <i>C</i> )	. . . . .	Central
White, Joseph ( <i>C</i> )	. . . . .	Las Cruces
Yoast, Irvin ( <i>A</i> )	. . . . .	Rincon
Yoast, Mamie Ella ( <i>B</i> )	. . . . .	"

## Summary

College Students	. . . . .	42
Stenography Students	. . . . .	19
Preparatory Students—Advanced Division	. . . . .	33
“ “ Special Class	. . . . .	31
“ “ Elementary Division	. . . . .	79
Total	. . . . .	<hr/> 204



# Agricultural Experiment Station

## Board of Control

(Board of Regents of the College)

L. BRADFORD PRINCE, LL. D., President, Santa Fé, N. M.

P. H. CURRAN, Secretary and Treasurer, Las Cruces, N. M.

GRANVILLE A. RICHARDSON, Roswell, N. M.

A. A. JONES, East Las Vegas, N. M.

PRISCILIANO MCRENO, Las Cruces, N. M.

### ADVISORY MEMBERS

HON. MIGUEL A. OTERO, Governor, Santa Fé, N. M.

HON. MANUEL C. DE BACA, Superintendent of Public Instruction, Santa Fé, N. M.

## Station Staff

FREDERIC W. SANDERS, Ph. D., Director

ARTHUR GOSS, M. S., A. C., Vice-Director, Chemist

T. D. A. COCKERELL, Entomologist

E. O. WOOTON, A. M., Botanist

J. D. TINSLEY, B. S., Soil Physicist and Meteorologist, and  
Superintendent of Roswell Sub-Station

JOHN J. VERNON, B. S. Agr., Agriculturist

W. M. REED, C. E., Irrigation Engineer

FABIAN GARCIA, B. S. Horticulturist

R. F. HARE, M. S., Assistant Chemist

ALFRED M. HOLT, M. S., Second Assistant Chemist

JOSEPH F. BENNETT, JR., M. S., Assistant Botanist

FRANK E. LESTER, Registrar

HELEN M. MACGREGOR, Stenographer

CHARLES E. MEAD, B. S., Superintendent San Juan Sub-Station,  
Aztec, N. M.

JOHN THORNHILL, Superintendent Las Vegas Sub-Station,  
East Las Vegas, N. M.

# Agricultural Experiment Station

By the Congressional Act of 1887, the Hatch Act (see page 10), a "Department" of Agricultural Colleges was endowed, having for its purpose the performing of experiments of value to Agriculture and Horticulture and the diffusing of valuable information among the people. The Territorial Act of February 28, 1889, which established the New Mexico College of Agriculture and Mechanic Arts, established also an Experiment Station in connection with the College. This department is in successful operation.

The College Farm, which was donated to the Territory by the citizens of Doña Ana County, contains about 250 acres. Nearly 100 acres of this farm is good river bottom land, supplied with water from the Las Cruces Community ditch, which crosses it. The leading experiments at present being conducted on the College Farm have for their object the determination of irrigation problems: the actual amount of water used under ordinary methods of farming, the amount of water necessary to the production of crops, how far cultivation may be made to serve in the saving of moisture to the soil, etc. Tests of grasses and forage crops and experiments in orchard management are also being made.

In addition to the work of the Agricultural section, the departments of Chemistry, Botany, and Entomology are employed in solving problems of practical interest to the New Mexico farmer and fruit grower.

The following Bulletins have been issued from the Experiment Station, and, with the exception of those marked with an asterisk, will be sent free of charge to all persons in New Mexico who apply for them:—

\* No. 1, April, 1890—General Information.

\* No. 2, October, 1890—Outline of Plans of Experimentation.

No. 3, June, 1891—Preliminary Account of Some Insects

Injurious to Fruit—C. H. Tyler Townsend.

No. 4, March, 1892—Fruit Trees, Forest and Shade Trees, Nut-bearing Trees, and Vegetables—A. E. Blount.

No. 5, March, 1892—Notices of Importance Concerning Fruit Insects—C. H. Tyler Townsend.

No. 6, March, 1892—Cereals, Forage Plants, Grasses, Clovers, Textile Plants, and Sorghums—A. E. Blount.

No. 7, June, 1892—Scale Insects in New Mexico—C. H. Tyler Townsend.

\* No. 8, November, 1892—Wheat, Oats, Barley, Rye, Sugar Beets, Sorghum, Canaigre, etc.—A. E. Blount.

No. 9, May, 1893—Insectides and their Appliances—C. H. Tyler Townsend.

No. 10, September, 1893—Insects of 1893—T. D. A. Cockerell.

\* No. 11, October, 1893—Notes on Canaigre and Meteorological Data—A. E. Blount and Harvey H. Griffin.

No. 12, November, 1893—The Value of Rio Grande Water for the Purpose of Irrigation—Arthur Goss.

No. 13, New Mexico Weeds, No. 1—E. O. Wooton.

No. 14, Canaigre—A. E. Blount.

No. 15, Entomological Observations in 1894; Life Zones in New Mexico; Entomological Diary at Santa Fé—T. D. A. Cockerell.

No. 16, September, 1895—The Russian Thistle—E. O. Wooton.

No. 17, December, 1895—Principles of Stock Feeding and Some New Mexico Feeding Stuffs—Arthur Goss.

No. 18, March, 1896—Some New Mexico Forage Plants—E. O. Wooton.

No. 19, April, 1896—Report of the Entomologist (Part I.)—T. D. A. Cockerell.

No. 20, December, 1896—Seeds—George Vestal.

No. 21, January, 1897—Results of Experiments at San Juan Sub-Station—H. H. Griffin.

No. 22, March, 1897—Alkali in the Rio Grande and Ani-

mas Valleys—Arthur Goss and H. H. Griffin.

No. 23, April, 1897—Sugar Beets—Cornelius T. Jordan.

\* No. 24, August, 1897—Life Zones in New Mexico—T. D. A. Cockerell.

No. 25, February, 1898—Preliminary Notes on the Codling Moth—T. D. A. Cockerell.

No. 26, June, 1898—New Mexico Sugar Beets—Arthur Goss.

No. 27, June, 1898—Report on Plums—Geo. Vestal and Fabian Garcia.

No. 28, December, 1898—Life Zones in New Mexico, No. 2—T. D. A. Cockerell.

No. 29, May, 1899—New Mexico Sugar Beets—Arthur Goss and A. M. Holt.

No. 30, May, 1899—The Effect of Spring Frosts on the Peach Crop; With Cultural Notes on the Peach in New Mexico—Fabian Garcia.

No. 31, December, 1899—A Study of Soil Moisture—Charles A. Keffer and John D. Tinsley.

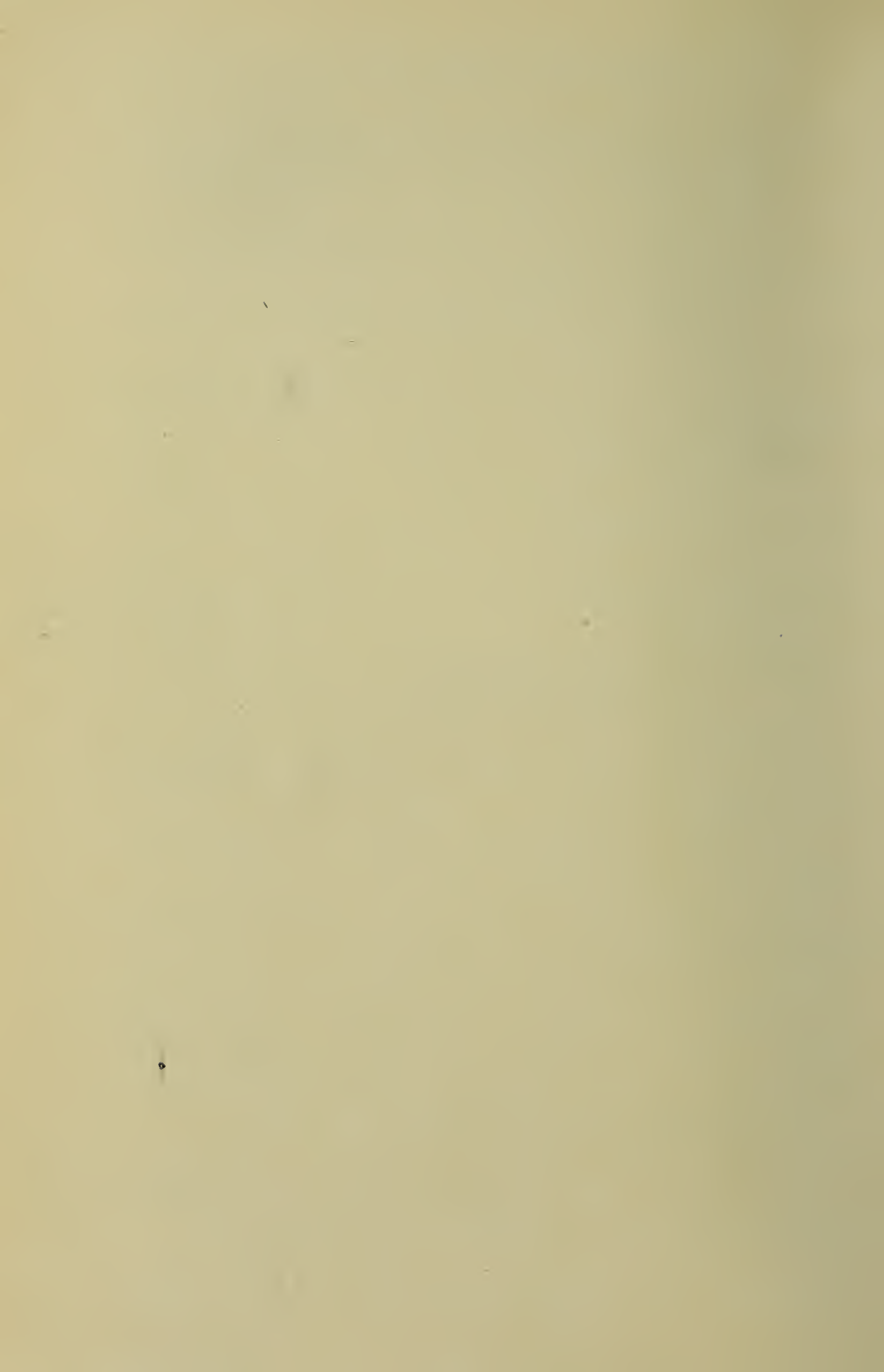
No. 32, December, 1899—Grasses and Forage Crops—Charles A. Keffer.

No. 33, April, 1900—Notes from the San Juan Sub-Station—Charles E. Mead.

No. 34, June, 1900—Principles of Water Analysis as Applied to New Mexico Waters—Arthur Goss.

Branch experiment stations are located at Roswell, Chaves County; Las Vegas, San Miguel County; and Aztec, San Juan County. These experiment farms were donated by the citizens of their respective localities to the Territory. During the last session of the legislature provision was made for their support. The Roswell Station at the present time is the principal seat of our experiments in sub-drainage.

\*The edition of these Bulletins is exhausted.

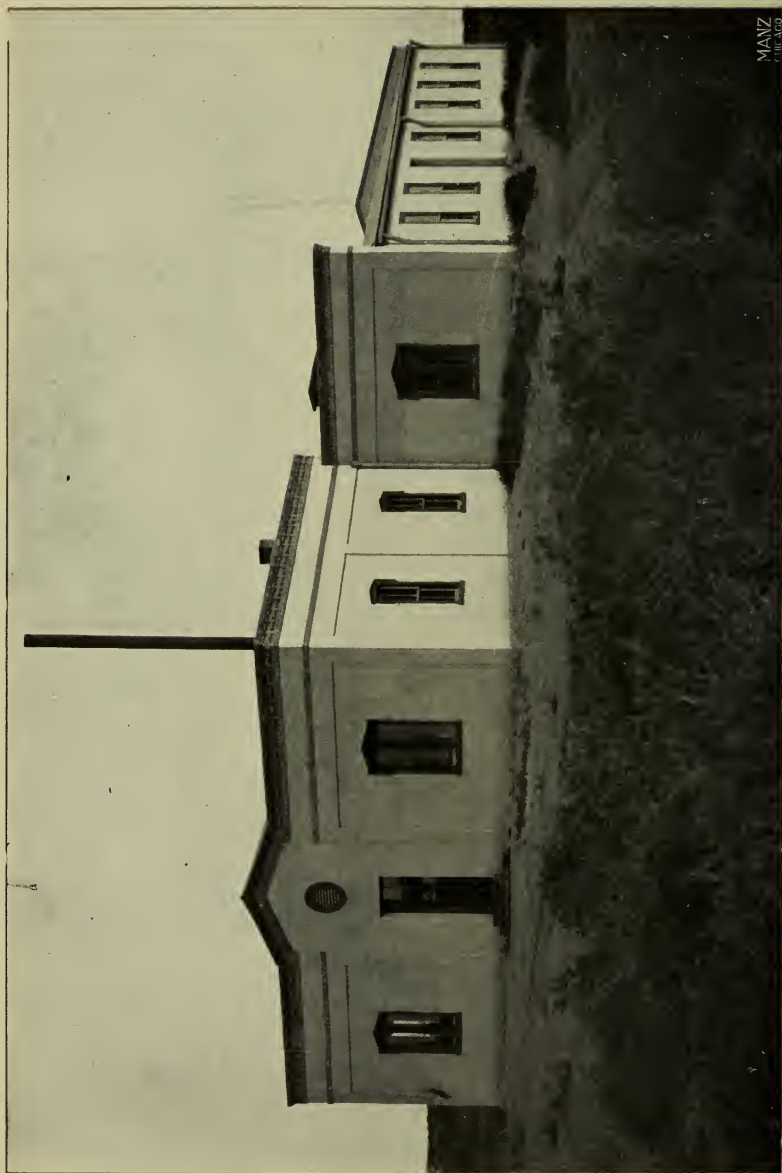




THE MAIN BUILDING.

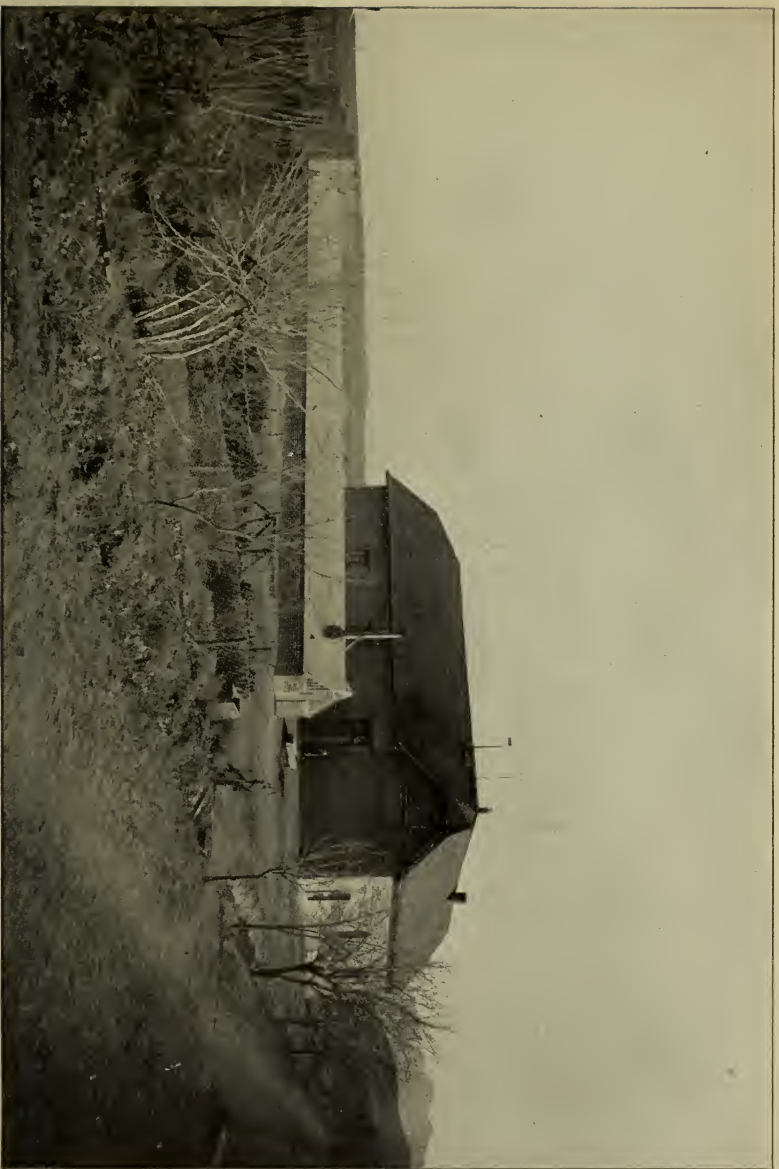
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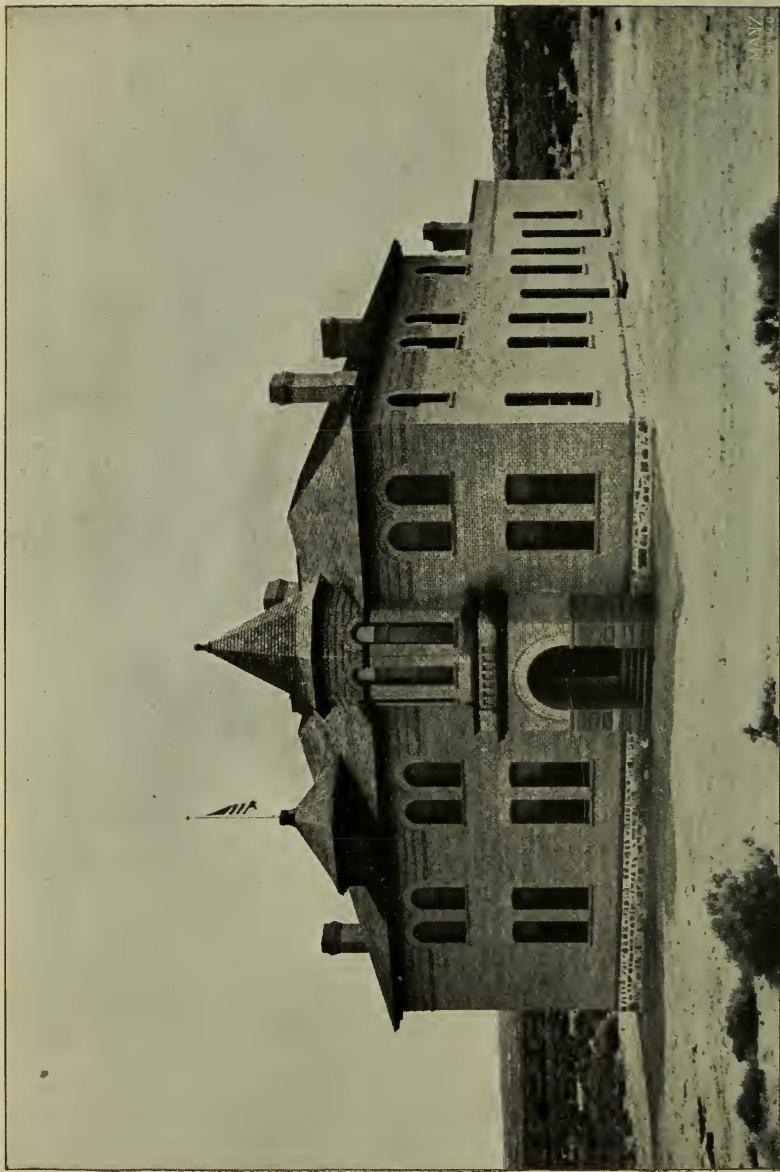


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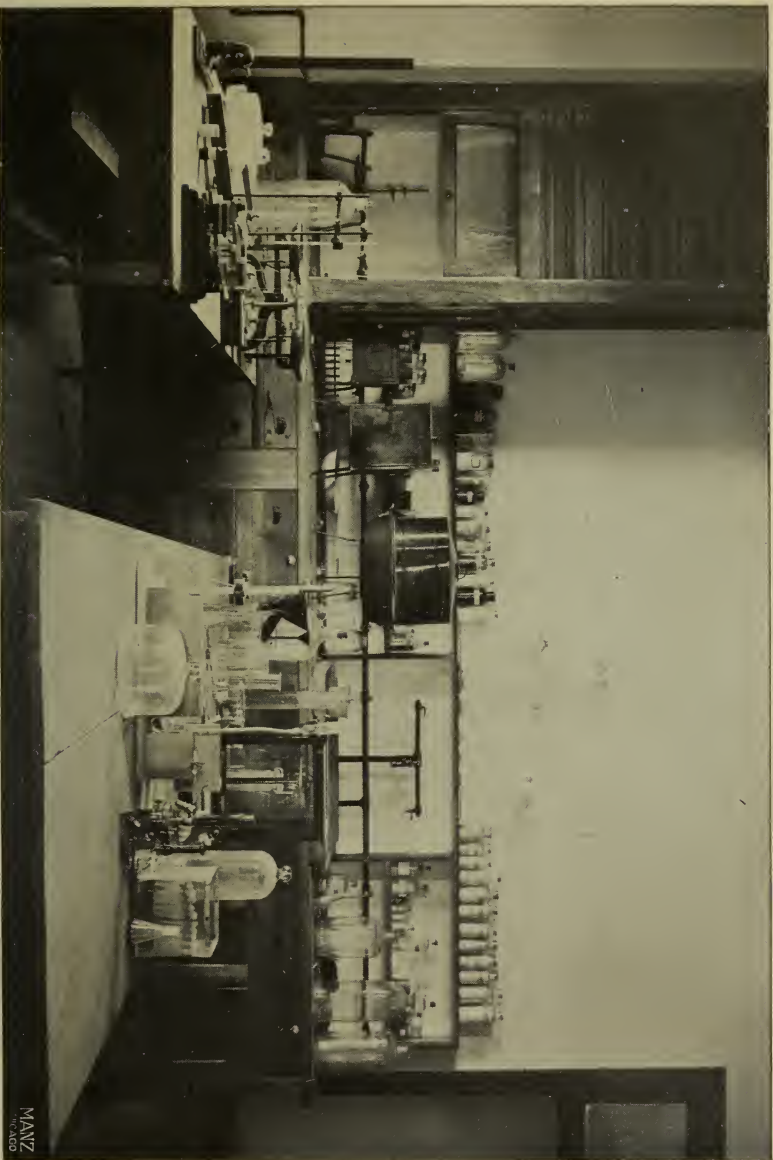


GREENHOUSE AND FARM BUILDINGS.



SCIENCE HALL.

LABORATORY OF PLANT PHYSIOLOGY AND BACTERIOLOGY.



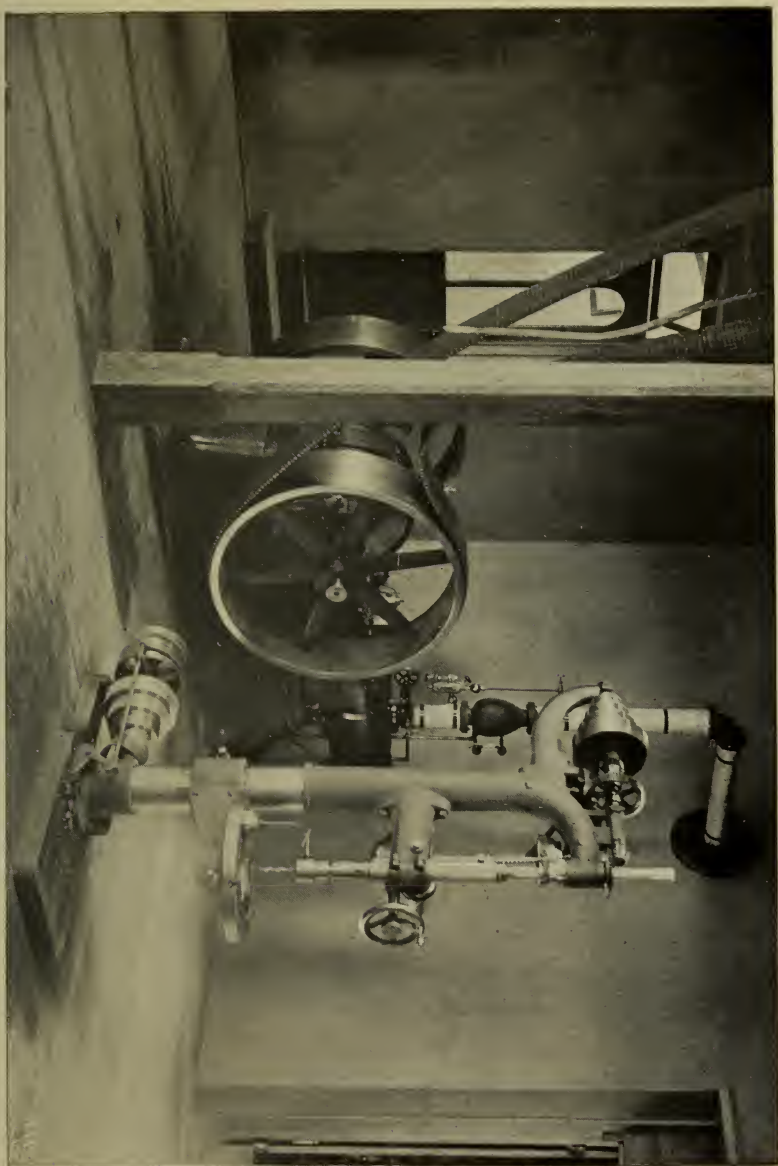
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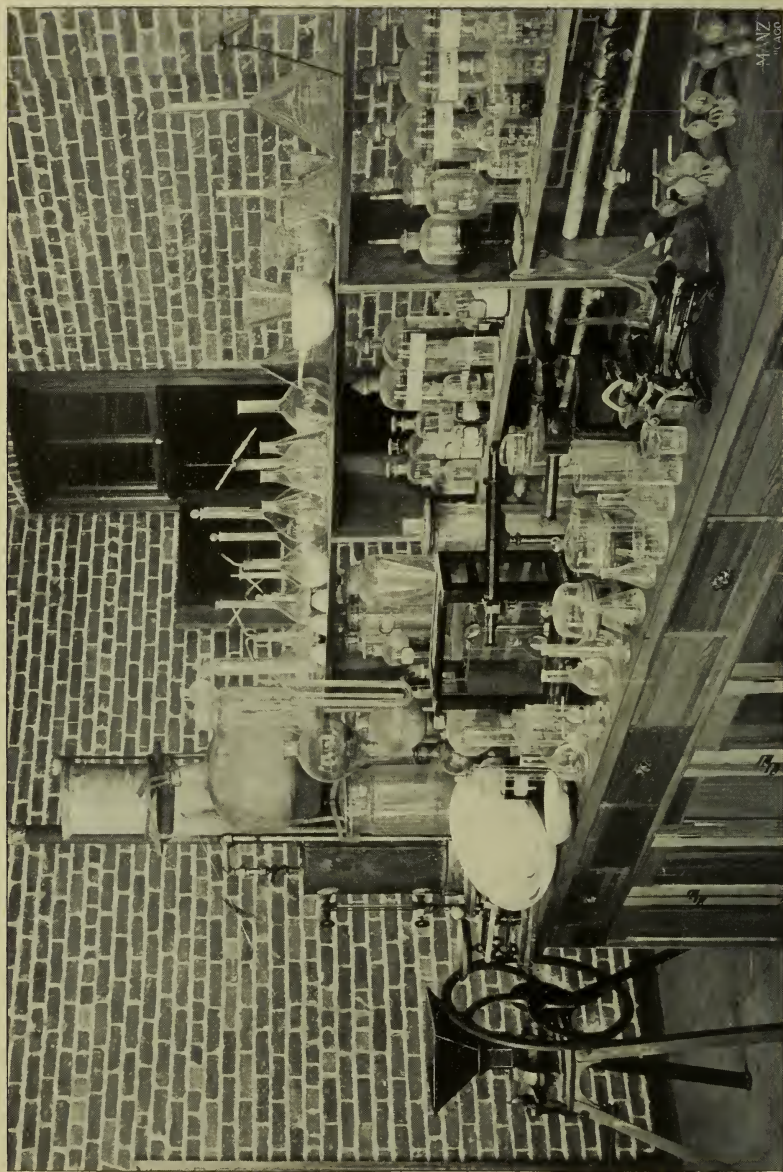
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CHICAGO

GIRLS' DORMITORY.



ENGINE IN THE MACHINE SHOP.



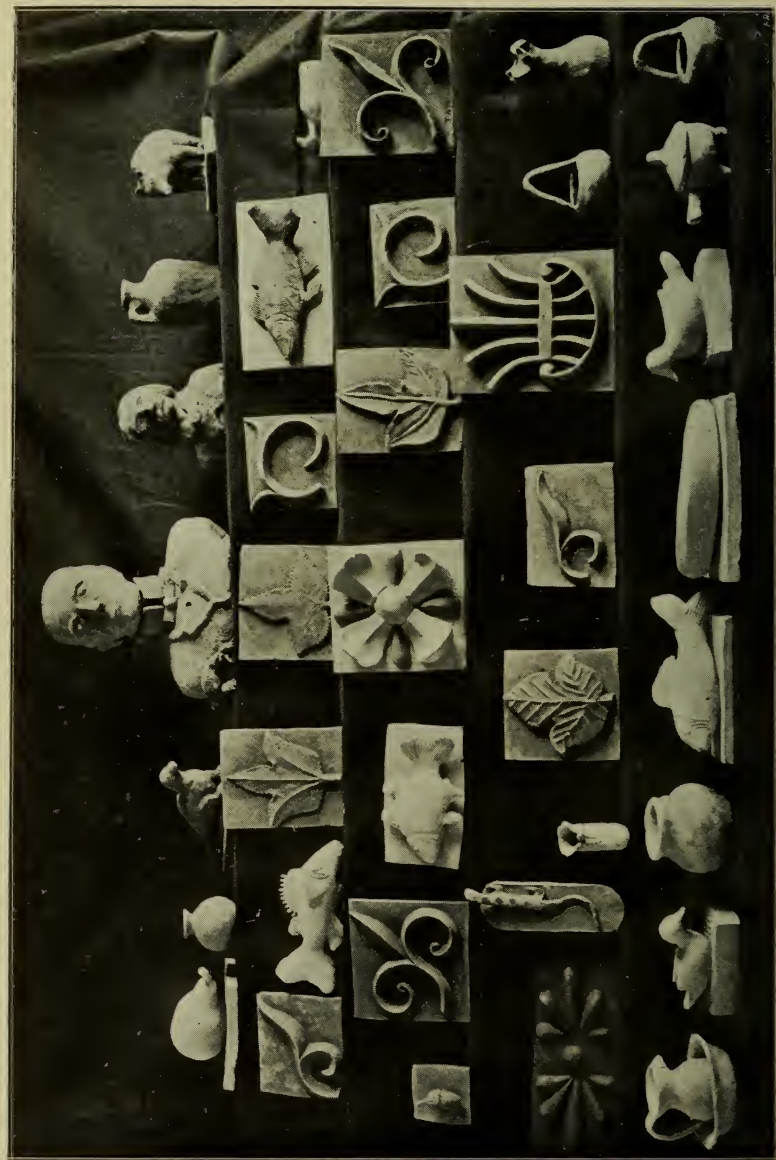


APPARATUS IN CHEMICAL LABORATORY.

M. V. Z.  
1900



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MANUAL TRAINING (CLAY MODELING) WORK DONE BY STUDENTS IN THE PREPARATORY DEPARTMENT.



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Catalogue of Students for 1900—1901  
and Announcement for 1901—1902



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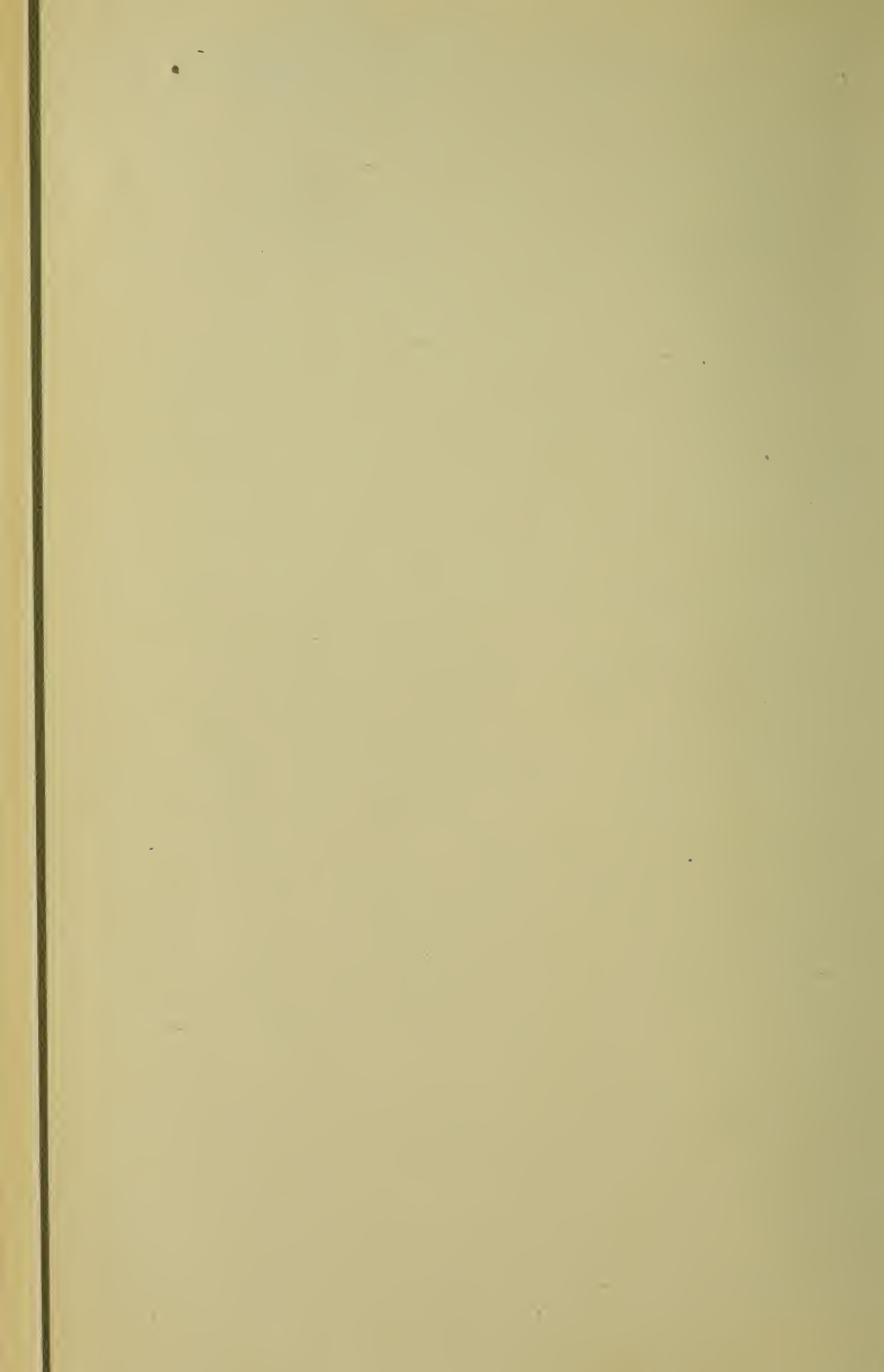
Catalogue of Students for 1900-1901

AND

Announcement for 1901-1902

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SANTA FE, N. M.:  
NEW MEXICAN PRINTING COMPANY.  
1901.



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## CALENDAR FOR 1901-1902

September	2-3, 1901, Examination of Candidates for Admission and reexamination of deficient students.
"	2-3-4, 1901, Matriculation of students.
"	4-5, 1901, Assignment of students to classes and assignment of work by class instructors.
"	6, 1901, Regular class work of 1st term begins.
November	22, 1901, Recitations of 1st term begins.
"	25-27, 1901, Examination of classes for 1st term's work.
"	28, 1901, Thanksgiving holiday.
December	2, 1901, Assignment of students to classes for second term and assignment of work by class instructors.
"	3, 1901, Regular class work for second term begins.
"	21, 1901, Christmas vacation begins.
January	5, 1902, Christmas vacation ends.
February	22, 1902, Washington's Birthday—holiday.
"	28, 1902, Recitations of 2nd term end.
March	3-4-5, 1902, Examinations for 2nd term's work.
"	10, 1902, Assignment of students to class for 3rd term and assignment of work by class instructors.
"	11, 1902, Regular class work for third term begins.
May	2, 1902, Field Day.
"	23, 1902, Recitations for third term end.
"	26-29, 1902, Examinations of third term's work; Senior vacation.
"	30, 1902, Memorial Day—holiday.
June	1, 1902, Baccalaureate Sermon.
"	2, 1902, P. M., Address to Columbian Literary Society.
"	3, 1902, Alumni meeting.
"	4, 1902, Commencement Exercises.

### **BOARD OF REGENTS**

L. Bradford Prince, LL.D., President, Santa Fe, N. M.  
P. H. Curran, Secretary and Treasurer, Las Cruces, N. M.  
Granville A. Richardson, Roswell, N. M.  
A. A. Jones, Las Vegas, N. M.  
H. B. Holt, Las Cruces, N. M.

### **Advisory Members**

Hon. Miguel A. Otero, Governor of New Mexico, Santa Fe,  
N. M.  
Hon. J. Francisco Chaves, Supt. of Pub. Instruction, Santa  
Fe, N. M.

LUTHER FOSTER, M. S. A.,

PRESIDENT OF THE COLLEGE AND  
DIRECTOR OF THE EXPERIMENT STATION  
(ELECTED NOV. 21st, 1901)

## FACULTY

FRANCIS E. LESTER, Executive Officer in Charge, Registrar,  
and Principal of the Department of Stenography.

CLARENCE T. HAGERTY, B. S., Notre Dame University, 1890;  
M. S., *ibid.*, 1895. Professor of Mathematics and  
Astronomy.

ARTHUR GOSS, B. S., Purdue University, 1888; A. C., *ibid.*,  
1889; M. S., *ibid.*, 1895. Professor of Chemistry.

FRANK W. BRADY, B. M. E., Purdue University, 1888; M. E.,  
*ibid.*, 1894. Professor of Mechanical Engineering and  
Superintendent of Buildings.

HIRAM HADLEY, A. M., Earlham College, 1885. Professor of  
History and Philosophy.

ELMER O. WOOTON, B. S., Earlham College, 1889; A. M., *ibid.*,  
1896. Professor of Biology, and in charge of Geology  
and Physics.

FREDERICK F. BARKER, LLB., Cambridge University (Eng-  
land), 1891. Professor of Rhetoric and Literature.

JOHN DABNEY TINSLEY, B. S., New Mexico Coll. of Agr. and  
Mech. Arts, 1899. Professor of Soil Physics.

ALICE HORNING, B. S., Agricultural College of Oregon, 1882.  
Professor of Domestic Economy, Dean of Women, and  
Matron of the Women's Hall.

JOHN J. VERNON, B. S. AGR., Iowa State College, 1897.  
Professor of Agriculture and Horticulture and Super-  
intendent of Grounds.

RALEIGH FREDERICK HARE, B. S., Alabama Polytechnic In-  
stitute, 1892; M. S., *ibid.*, 1893. Assistant Professor  
of Chemistry.

FABIAN GARCIA, B. S., New Mexico Coll. of Agr. and Mech.  
Arts, 1894. Assistant Professor of Horticulture.

CHARLES MILLS, Assistant Professor of Mechanical Engi-  
neering.

D. M. RICHARDS, A. B., Oberlin College. Principal of the Preparatory Department.

**Other Officers of Instruction**

WILLIAM ALEXANDER SUTHERLAND, B. S., New Mexico Coll. of Agr. and Mech. Arts, 1898. Instructor in Spanish and Latin.

GERALDINE COMBS, Assistant in Preparatory Department.

HELEN MAR MACGREGOR, Assistant in the Stenography Department, and College Stenographer.

ARCHIE BRUCE SAGE, B. S., New Mexico Coll. of Agr. and Mech. Arts, 1900. Assistant in Mechanical Engineering Department.

CHARLOTTE A. BAKER, Librarian and Assistant in English.

LAVINIA LEA BROWN, Assistant in Preparatory Department.

FANNIE ELIZABETH BLAKESLEY, B. L., Washburn College, 1895. Assistant in the Preparatory Department.

## FACULTY COMMITTEES

### Course of Study

Clarence T. Hagerty, *Chairman*

E. O. Wooton.	F. W. Brady.
D. M. Richards.	J. J. Vernon.

### Catalogue

E. O. Wooton, <i>Chairman</i> .	D. M. Richards.
---------------------------------	-----------------

### Judiciary

Arthur Goss, *Chairman*

C. T. Hagerty.	H. Hadley.
----------------	------------

### Buildings and Grounds

Frank W. Brady, *Chairman*

J. J. Vernon.	F. Garcia.
---------------	------------

### Entertainment

Alice Horning, *Chairman*

D. M. Richards.	E. O. Wooton.
-----------------	---------------

### Extension Work and Advertising

H. Hadley, *Chairman*

F. E. Lester.	J. D. Tinsley.
---------------	----------------

### Student Conference

D. M. Richards, *Chairman*

Alice Horning.	F. F. Barker.
----------------	---------------

### Boarding

Francis E. Lester, *Chairman*

F. F. Barker.	Alice Horning.
---------------	----------------

### Library

F. F. Barker, *Chairman*


J. D. Tinsley.	J. J. Vernon.
----------------	---------------

Miss Baker, *ex officio*.

NOTE: The president is ex officio a member of all committees.

## GENERAL STATEMENT

### Location



The New Mexico College of Agriculture and Mechanic Arts is situated at Mesilla Park, Doña Ana County. Its location in the Mesilla Valley gives it great advantages for agricultural and horticultural experiments, and is a good one from a sanitary point of view. The valley is noted for being the largest fruit and alfalfa shipping point in the Territory, and is rapidly becoming known as perhaps the finest winter health resort in the United States. The College farm is crossed near the center by a fine driveway from Mesilla Park station to the College buildings. Visitors are always wel-

come. Mesilla Park is on the main line of the Atchison, Topeka & Santa Fe Railroad, and is easily accessible from different parts of the Territory. Las Cruces, a town about two and one half miles distant, has a population of about 3,000 inhabitants. It has a public school, two mission schools and a Catholic academy for the education of girls. The Presbyterians, Methodist, Baptists, and Roman Catholics have church organizations, and students are always welcomed to their services.

### Origin

The New Mexico College of Agriculture and Mechanic Arts, under a slightly different name, was established by the Twenty-eighth Assembly of New Mexico by act approved February 28, 1889. The purpose of the institution is defined in Section 19 of this act:—

“The Agricultural College created and established by this act shall be non-sectarian in character, and devoted to practical instruction in agriculture, mechanic arts, natural sciences connected therewith, as well as a thorough course of instruc-



tion in all branches of learning bearing upon agriculture and other industrial pursuits."

The branches in which instruction may be given are set forth as follows in Section 20 of the same act:—

"The course of instruction of the College hereby created shall embrace the English language, literature, mathematics, philosophy, civil engineering, chemistry, animal and vegetable anatomy and physiology, the veterinary art, entomology, geology, and political, rural, and household economy, horticulture, moral philosophy, history, mechanics, and such other sciences and courses of instruction as shall be prescribed by the regents of this institution of learning."

By Section 25 of the same act, the assent of the Legislative Assembly was given to the establishment of Experiment Stations within the Territory of New Mexico in connection with the Agricultural College, in pursuance of the act of Congress approved March 2, 1887,—the Hatch Act.

### Income

The revenues of this College are derived from the following sources:—

1. Students' fees.
2. Sale of College farm products.
3. Territorial tax and special appropriations.
4. The United States, under Congressional Act of August 30, 1890—the Morrill fund.
5. The United States, under Congressional Act of March 2, 1887—the Hatch fund.

The money received from students and from the sale of products from the College farm has, so far, been very limited, and has been applied to the payment of such expenses as are not provided for by either act of Congress.

The Territorial Act creating the institution provided for an annual levy of one-fifth of a mill, commencing with the year 1889. This levy now yields an annual income of about \$6,500.

The Morrill Fund was created by the United States law of August 30, 1890, "for the more complete endowment and sup-

port of the Colleges of Agriculture and Mechanic Arts in the several States and Territories." It is paid over to them before July 31, of each year. The College received this fund first in 1890, to the amount of \$15,000. Henceforth the fund will amount to \$25,000. This fund can be applied *only* "to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic sciences, with special reference to their application in the industries of life, and to the facilities for such instruction." *No part of this fund may be used for building or repairs, or for ordinary running expenses, such as salaries of administrative officers,—as president, clerk, librarian, etc.,—equipment of the library, and ordinary furniture, stationery, printing, etc., or for teaching any subject not referred in this Act.* The theory of the federal government in accordance with which these appropriations have been made, is that the State or Territory must provide the buildings and grounds and keep them in repair and must also provide for all the general administrative expenses of the college, and that the federal appropriation is to be used only for the purposes of paying teachers and supplying the necessary books and apparatus for teaching the specific subjects mentioned in the Act.

By the United States law of March 2, 1887, the *Hatch Act*, appropriations are made for the maintenance of Experiment Stations in connection with Agricultural Colleges in the several States and Territories. For the support of each station there is set apart the sum of \$15,000 a year, payable quarterly. This money must be used for "paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results." Bulletins showing progress must be printed each quarter, and sent to each newspaper in the Territory and to all farmers who apply for them. This fund first became available for this College in 1889-90, to the amount of \$10,000. Since July 1, 1890, \$15,000 a year has been received. *After the first year, only five per cent of this fund may be used to erect, enlarge or repair buildings for the use of the Experiment Station; and no part of it may be*

*applied to the expenses of instruction or to general college purposes. It must be applied exclusively to the carrying on of agricultural experiments and to the dissemination of the results thereof.*

### Endowment

A bill has recently been passed by Congress granting this College 100,000 acres of public land, the proceeds of which are to form a permanent endowment fund. If this land be carefully located, it can be made to yield the College in time a fair endowment.

### Requirements for Admission

Candidates for admission to the *Freshman* year will be admitted without examination upon completion of the subjects of the Senior Preparatory, or "Sub-Freshman," year, or on a Certificate showing that the same or an equivalent amount of work has been completed at any of the following High Schools:

Albuquerque High School.  
Deming High School.  
El Paso High School.  
Las Vegas High School.  
Raton High School.  
Roswell High School.  
Gallup High School.

Other candidates must pass examinations in the following subjects:—

*English*.—Lockwood's Lessons in English, or its equivalent. No applicant will be admitted who is unable to write English fairly correct in spelling, punctuation, paragraphing, and so forth, and free from gross grammatical and rhetorical errors. Some knowledge of literature is also required.

*General History*.—Myers' General History or Sheldon's General History, or their equivalent.

*Algebra*.—Milne's High School Algebra through logarithms, or its equivalent.

*Physics*.—Shaw's *Physics by Experiment*, or its equivalent.

*Elementary Chemistry*.—At least twelve weeks' work.

*Physical Geography*.—Maury's *Physical Geography*, or its equivalent.

*Latin*.—(optional with Spanish for engineering students).—  
One year's work, or its equivalent.

*Physiology*.—Martin's *Human body* (briefer course), or its equivalent.

*Civil Government*.—McCleary's *Studies in Civics*, or its equivalent.

*Free-hand Drawing*.—At least a year's thorough work.

*Arithmetic*.—White's *Complete Arithmetic*, or its equivalent.

*History of the United States*.—Fiske's *School History* or Barnes'

*Brief History of the United States*, or their equivalent.

*Geography*.—Maury's *Manual of Geography*, or its equivalent.

*Carpentry and Wood Working Tools, or Domestic Economy*—as given in the Senior Preparatory year of this College. An equivalent in natural Science, language or history will be accepted for this work, except in the case of students who propose to pursue the Engineering course, who must take the *Carpentry and Wood Working Tools*.

Students coming from other colleges whose requirements for admission are substantially equivalent to those of the college may be admitted to corresponding classes here, provided they bring certificates showing amount of work completed. Other candidates for advanced standing will be examined in the subjects prescribed for admission, and also in the undergraduate studies which they desire to be credited with.

All applicants for admission must furnish satisfactory evidences of good moral character. The President and Faculty reserve the right to reject students who appear to be too immature to live away from home.

## COURSES OF STUDY

THE COLLEGIATE COURSES OF STUDY ARE AS FOLLOWS

## Freshman Year

GENERAL COURSE	AGRICULTURAL COURSE	MECHANICAL ENGINEERING COURSE
<b>FIRST TERM</b> English (Rhetoric and Composition, etc.). 5* Geometry (Plane). 5 Biology (introduction). 10 P† Latin or Spanish. 5	Freshmen in the Agricultural Course may pursue either the studies of the General, or of the Engineering Course.	<b>FIRST TERM</b> English. 5 Geometry. 5 Biology. 10 P Spanish or Latin. 5
<b>SECOND TERM</b> English. 5 Geometry (Plane). 5 Biology (Zoology). 10 P Latin or Spanish. 5		<b>SECOND TERM</b> English. 5 Geometry. 5 Spanish or Latin. 5 Mechan. Draw.. 4 P Iron and Steel Forging. 6 P
<b>THIRD TERM</b> English. 5 Geometry (Solid). 5 Biology (Botany). 10 P Latin or Spanish. 5		<b>THIRD TERM</b> English. 5 Geometry. 5 Spanish or Latin. 5 Mechan. Draw.. 4 P Bench Work in Wood. 6 P

## Sophomore Year

GENERAL COURSE	AGRICULTURAL COURSE	MECHANICAL ENGINEERING COURSE
<b>FIRST TERM</b> English (Literature). 5 Physics. 5 Latin or Spanish. 5 Trigonometry. 5	<b>FIRST TERM</b> English. 5 Physics. 5 Trigonometry. 5 Elective. 5 (or 10 P)	<b>FIRST TERM</b> English. 5 Physics. 5 Trigonometry. 5 Pattern Making. 6 P Foundry Practice. 4 P
<b>SECOND TERM</b> English. 5 Physics. 5 Latin or Spanish. 5 Elective. 5	<b>SECOND TERM</b> English. 5 Physics. 5 Live Stock. 2 Surveying. 6 P Elective. 5	<b>SECOND TERM</b> English. 5 Physics. 5 Descriptive Geometry. 5 Surveying. 6 P Mech. Drawing. 4 P
<b>THIRD TERM</b> English. 5 Physics. 5 Latin or Spanish. 5 Elective. 5	<b>THIRD TERM</b> English. 5 Physics. 5 Score-card Practice. 2 P Live Stock. 4 Elective. 5	<b>THIRD TERM</b> English. 5 Physics. 5 Advanced Algebra. 3 Anal. Geometry. 2 Pattern Making. 6 P Mach. Design. 4 P

\* The figure following each subject indicates the number of hours recitation per week.

† P = practice, being intended to include all laboratory, shop, greenhouse or field work required of students. This work counts for half as much as an ordinary prepared recitation.



Junior Year

GENERAL COURSE	AGRICULTURAL COURSE	MECHANICAL ENGINEERING COURSE
<b>FIRST TERM</b>	<b>FIRST TERM</b>	<b>FIRST TERM</b>
English, 1 Chemistry, 5 Astronomy, 4 plus 2 P Domestic Economy (for women), 8 P or Elective, 4 Elective, 5	English, 1 Chemistry, 5 Meteorology or Astron- omy, 4 Soils and Crops, 5 Principles of Breeding, 3 Elective, 2	English, 1 Chemistry, 5 Analytical Geometry, 5 Ele. Mechanics, 4 Machine Design, 4 P Bench Work in Iron, 5 P
<b>SECOND TERM</b>	<b>SECOND TERM</b>	<b>SECOND TERM</b>
English, 1 Chemistry, 10 P Political Economy, 4 Domestic Economy (for women), 8 P or Elective, 4 Astronomy, 2 P Elective, 5	English, 1 Chemistry, 10 P Political Economy, 4 Practical Agriculture, 5 Stock-Feeding, 4 Elective, 1	English, 1 Chemistry, 10 P Calculus, 5 Strength of Materials, 4 Mechanism, 5
<b>THIRD TERM</b>	<b>THIRD TERM</b>	<b>THIRD TERM</b>
English, 1 Chemistry, 8 P Physiology, 5 Domestic Economy (for women), 8 P or Elective, 4 Astronomy, 2 P Elective, 5	English, 1 Chemistry, 8 P Entomology, 10 P Pomology, 3 plus 2 P Elective, 6	English, 1 Chemistry, 8 P Calculus, 5 Anal. Mechanics, 5 Steam Boilers, 5

Senior Year

GENERAL COURSE	AGRICULTURAL COURSE	MECHANICAL ENGINEERING COURSE
<b>FIRST TERM</b>	<b>FIRST TERM</b>	<b>FIRST TERM</b>
English, 2 Mineralogy, 10 P History of Civilization, 5 Elective, 8	English, 2 Mineralogy, 10 P Agricultural Chemistry, 6 P Theory of Horticulture, 2 Soil Physics, 8 P Elective, 4	English, 2 Mineralogy, 10 P Hydraulics, 5 Steam Engine, 4 Designing, 4 P Machine Shop, 4 P
<b>SECOND TERM</b>	<b>SECOND TERM</b>	<b>SECOND TERM</b>
English, 2 Geology, 5 History of Civilization, 5 Elective, 8	English, 2 Geology, 5 Agricultural Chemistry, 6 P Rural Engineering, 2 + 6 P Elective, 5	English, 2 Geology, 5 Metallurgy, 4 Roofs and Bridges, 4 P Engine and Boiler Tests, 6 P Elective, 4
<b>THIRD TERM</b>	<b>THIRD TERM</b>	<b>THIRD TERM</b>
English, 2 History of Civilization, 5 Thesis Elective, 8	English, 2 Rural Economics, 5 Dairying, 3 plus 4 P Thesis Agricultural Chemistry, 6 P or Elective, 3	English, 2 Electrical Engineering, 5 Engineering Structures, 5 Thesis Elective, 3



## Elective Studies and Special Courses

FIRST TERM	FIRST TERM	FIRST TERM
Journalism, 2 Versification, 1 Advanced Zoology, 4 P Advanced Botany, 6 P Advanced Chemistry, 6 P History of Education, 5 English History, 5 American Law, 5	Logic, 5 Domestic Economy, 4 P Forestry, 2 Floriculture, 2 plus 2 P Advanced Spanish, 5 Assaying, 6 P	Stenography, 5 Typewriting, 5 P Music
SECOND TERM	SECOND TERM	SECOND TERM
Journalism, 2 Versification, 1 Advanced Zoology (continued), 4 P Advanced Botany (continued), 6 P Advanced Chemistry (continued), 6 P Applied Psychology, 5 English History (continued), 5	Domestic Economy, 4 P Soil Physics, 6 P Commercial Spanish, 5 Assaying (continued), 6 P	Stenography (continued), 5 Advanced Stenography, 1 Typewriting (continued), 5 P Spanish Stenography, 5 Music
THIRD TERM	THIRD TERM	THIRD TERM
Journalism, 2 Versification, 1 Advanced Zoology (continued), 4 P Advanced Botany (continued), 6 P Advanced Chemistry (continued), 6 P Advanced Geology, 3 Theory and Practice of Education, 1 plus 4	A Period of American History, 5 Domestic Economy, 4 P Soil Physics, 6 P Floriculture, 2 plus 2 P Commercial Spanish (continued), 5 Assaying (continued), 6 P	Stenography (continued), 5 Advanced Stenography (continued), P Typewriting, 5 P Spanish Stenography (continued), 5 Music

NOTE ON ELECTIVE STUDIES.—The figures following the Elective Studies indicate the minimum amount of time that may be devoted to them. Whenever the other work of the students or of the instructor does not prevent, a greater amount of time may be given to the subject.

The elective studies are not assigned to any particular year, but may be taken whenever the student is prepared for them, and has the necessary time at his disposal, subject always to the approval of the faculty.

In addition to the courses expressly designated as Elective Studies, any study pursued in the College, and not prescribed in the course of study that is being followed by the student in question, may be elected by him. A student in the General Course, for example, may elect a study prescribed for Agricultural students; or, to give a more specific example, a Senior in the Engineering Course (who has four hours free for an elective in the second term) may elect Political Economy, which is given in the Junior year of the General and Agricultural Courses, provided it is given at an hour at which he is free from other engagements.

## THE ELECTIVE SYSTEM

It will be seen that in the Freshman year there may be said to be two courses, the engineering students spending in shop work the time that the students of the General Course devote to a foreign language, and the agricultural students having their choice of either course. In the Sophomore year there is a slight difference in the work prescribed for each of the courses, and in the Junior and Senior years the distinctive work of the several courses takes a much greater part of the students time and the three courses are quite different one from another.

From the second term of the Sophomore year on students of the General and Agricultural courses have a number of hours elective work, in which they may choose any of the subjects offered in the regular courses or any advanced work offered in subjects which are of special interest to them. The only prerequisites for such selections are that the student be prepared for the work and that he and the teacher both have a time at which the work can be done. The required work of the general course is only that which, in the judgment of the faculty, it is essential for all graduates of the institution to have pursued. Electives may be so chosen that a student may specialize to a degree along the line of literary or language work, in history or pedagogics, social science, chemistry, biology, agriculture or horticulture. Agricultural students may take cultural subjects or technical or purely scientific subjects.

*For the women* there is work in Domestic Science which they may elect, in which it is the endeavor of the department not only to prepare young women for ordinary every day home duties, but to give them some scientific and practical knowledge of feeding the sick and caring for the sanitary conditions of the home. Their practice work will consist not only of learning how to cook food but also how to serve it. During the junior year some time will be devoted to a short waitress' course, and in the possible eight terms of elective

work a fair general knowledge of the principles and practices of Domestic Science will be given.

### Special Courses

Students of mature years, who cannot remain long enough to take a full course, may be allowed to take special courses. The Faculty reserves the right to refuse such requests, or to order such modifications as may seem best for the student and the college. No degrees are granted for special work, but those who perform such work in a satisfactory manner will receive certificates.

For the course of study in the Preparatory Department, see page 60; for that in the Department of Stenography, page 56; and for the Assaying course, page 32. For the two years' course in Agriculture and Horticulture see page 24; for the single term courses in these subjects see page 26; and for the two years' course in Practical Mechanics see page 51.

### Degrees

The degree of *Bachelor of Science* (*B. S.*) is conferred on students who satisfactorily complete the work prescribed in any of the Collegiate courses of study.

The degree of *Master of Science*, (*M. S.*) is conferred on students who, after taking at this College the degree of *B. S.* pursue for at least one year here, or for two years as non-resident students, a course of study approved by the Faculty, pass an examination on the same, and present a satisfactory thesis.

## DEPARTMENTS OF INSTRUCTION

### SCHOOL OF AGRICULTURE

PROFESSOR VERNON

PROFESSOR TINSLEY

ASSISTANT PROFESSOR GARCIA



The School of Agriculture includes the departments of Agriculture and Horticulture and Soil Physics and Meteorology, and embraces all the work peculiar to the Agriculture Course except that in Agricultural Chemistry, given by the department of chemistry. The College is well prepared to give a thorough and complete course in the theory and practice of agriculture in its relation to the problems of the Territory.

#### Agronomy, or Agriculture Proper

1. *Soils and Field Crops*.—Preparation of the soil, plant growth, selection of seed, germination under irrigation systems, cultivation, harvesting, storage, marketing, etc., are among the subjects taken up in this course.

Morrow and Hunt's "Soils and Crops of the Farm", King's "The Soil", and Roberts' "The Fertility of the Land" form the basis for the term's work.

This study is given in the first term of the Junior year and requires five hours recitations a week.

2. *Practical Agriculture*.—This course is a continuation of the first term Junior work, and includes scientific and practical problems in general agriculture as applied to the farm and ranch. Special effort is made to apply the principles discussed to New Mexico agriculture. The College Farm affords excellent means of illustrating the work.

Second term, Junior. Five hours a week.

3. *Soil Physics*.—This work consists mainly of laboratory and field practice in the sampling of soils, determinations of moisture, salt content, water holding power, mechanical analyses, and a brief general study of the other physical characters of soils.

First term, Senior year, 8 hours practice.

4. *Meteorology*.—This work will consist of lectures and recitations with accompanying laboratory practice. The common meteorological instruments, their construction and uses, and those meteorological phenomena having most direct bearing on the agriculture of New Mexico, will be studied.

First term, Junior year, 4 hours.

In addition to this required work students may take elective work in Soil Physics or Meteorology either as advanced undergraduate work or graduate work.

5. *Rural Engineering*.—In a country where all the farming is done by the aid of irrigation, a course in rural engineering is of great importance. The planning of ditch-systems, the application of water to the land, the economic use of fields and crops, roads, buildings, and machinery comprise the general subjects of the course.

Second term, Senior. Two hours a week in class room and six hours practice.

6. *Rural Economics*.—History of agriculture, farm management, and rural law are among the subjects in this course.

Third term, Senior. Five hours a week.

#### **Zootechny, or Animal Industry**

This course aims to meet the growing needs of the Territory, inasmuch as stock raising is one of the leading industries. The subjects are pursued from a practical and scientific standpoint, having in view the thorough equipment of young men for successful work in breeding, care and management of large herds.

7. *Live Stock*.—This course includes a study of the history, development, characteristics, selection, care and man-



agement, points of utility, etc., of the different breeds of cattle.

This study is given in the second term of the Sophomore year and requires two hours' recitations a week.

8. *Live Stock*.—This course is a continuation of 7. A careful study is made this term of the different breeds of horses, sheep, and swine. Special attention is given to a discussion of breeds best adapted to New Mexico conditions. The subject matter of the text is supplemented by lectures. Throughout the course in Live Stock practical demonstration of the various points under discussion is made with individual animals of the college herd; also, occasional trips will be planned having in mind a study of the breeds, methods of handling, and local conditions of the various herds in this section.

Third term Sophomore. Four hours a week.

9. *Score-Card Practice*.—Animals are brought before the class for demonstration and scoring. Lovelock's American Standard of Excellence, and other recognized standards will be followed in judging cattle, sheep, and swine.

The object of the study is to insure a familiarity with the characteristics of the leading breeds, so that students are enabled to become competent judges of live stock. This work is specially valuable for young men who expect in any way to deal with the live stock interests of the Territory. The work is coincident with the study of breeds of animals.

Third term, Sophomore. Two hours practice a week.

10. *Principles of Breeding*.—This course covers the laws governing the breeding of animals, and includes the principles of heredity, laws of correlation and variation, in and in and cross breeding, parentage, form types, and pedigree. Attention is given to the subject of breeding for beef and for the dairy.

First term, Junior. Three hours a week.

11. *Stock Feeding*.—The subject includes animal nutrition, chemistry of feeding stuffs, nutritive ratios, making rations, and a careful inquiry into the nutritive value of stock-foods available on the ranches and markets of New Mexico. Feed-



ing experiments are conducted by the Experiment Station and students will thus have an opportunity for practical observations in scientific feeding for beef or mutton and for the dairy.

Second term, Junior. Four hours a week.

12. *Dairying*.—The course in dairying comprises a study of the properties of milk and methods of handling milk and its products in the private dairy and in the thoroughly equipped creamery. Receiving and weighing, testing, separating, ripening cream, churning, pasteurizing, and marketing are subjects discussed in class-room. Instruction is also given in the principles of the Cheddar system of making cheese.

Third term, Senior. Three hours a week in class-room and four hours practice.

#### Horticulture and Forestry

13. *Pomology*.—The subjects of cultivation, propagation, thinning, pruning, spraying, irrigation and other related topics will be discussed. The extensive orchard and vineyards on the College Farm and several commercial orchards and vineyards in the vicinity afford unusual means of illustration. The student will have an opportunity to become acquainted with varieties of fruits which are adapted to the conditions in this section. In class-room the work will consist of text-books, discussions and supplementary reading. The laboratory work will consist mostly of making cuttings, budding, grafting, pruning, and spraying. "The Nursery-Book" and "Principles of Fruit Growing" by Bailey, are the text-books used.

Spring term, Junior. Three hours a week in class-room and two hours practice.

14. *Theory of Horticulture*.—The student having largely completed his biological studies, is prepared for a discussion of the principles underlying horticultural methods. Plant breeding, the influence of environment,—climate, soil, altitude, food,—and similar topics will be discussed.

Fall term, Senior. Two hours per week.

15. *Economic Entomology*.—This course is designed to give students a fair knowledge of the principle groups of insects of economic importance, especial attention being given to the study of injurious insects and the means of destroying them.

Spring term, Junior. Three hours a week in class-room and four hours practice.

16. *Forestry*—Elective.—The course in forestry is offered to Agricultural and Scientific students who have had sufficient preliminary training in biology. The nature of the course will be the study of wind-breaks, home planting, utility of forest plantations, and the general influence of forests on the climate and water courses. The subjects of forest reserves and forest-tree planting will also receive careful attention.

Spring term. Two hours per week.

17. *Floriculture*.—Elective.—The course in Floriculture is designed to be of a popular nature, and is especially adapted for women students. It consists of lessons in the propagation and management of flowering and foliage plants. Practice in seed-sowing, potting, transplanting, and taking of cuttings is offered. The greenhouse and equipments and forcing frames afford the necessary material and conveniences for the work.

Winter term, Freshman. Two hours class-room work and two hours practice.

18. *Floriculture*.—Elective.—This course is a continuation of course number 17. Borders, grouping, and arrangement of flowers, trees, and shrubbery for ornamental effect, will be considered. Attention will be given to the subject of ornamental gardens and the arrangement of home grounds considered from the landscape gardener's standpoint.

Spring term, Freshman. One hour recitation and two hours practice.

## SHORT COURSES IN AGRICULTURE AND HORTICULTURE



While we advise those who expect to become professors or instructors in agricultural schools and colleges to take the four years' course in agriculture and horticulture outlined above, yet we realize that there are many who for various reasons are unable to do this.

Owing to the demand for trained men to fill positions as foremen or superintendents of ranches and dairies, and believing that a territorial institution should offer every possible encouragement to those who desire to fit themselves for their chosen line of work, a two years' course and a twelve weeks course in agriculture and horticulture have been arranged.

### TWO YEARS COURSE IN AGRICULTURE

Requirements for admission:—Students are required to be at least sixteen years old and possess a good knowledge of Arithmetic, Reading, Spelling, United States History, Grammar and Composition.

#### First Year

FIRST TERM.	SECOND TERM.	THIRD TERM.
English 2. (Sr. Prep.)	English 2. (Sr. Prep.)	English 2 (Sr. Prep.)
Mathematics 5.....	Mathematics 5.....	Mathematics 5.
Biology 10P (Fresh.)..	Biology 10P (Fresh.)..	Biology 10P (Fresh.)
Horticulture 2—4P ....	Live Stock 2 (Soph.)..	Live Stock 2 (Soph.)
Soil Physics 8P... ..	Iron & Steel Forge	Score Card 2P (Soph.)
Spanish or Latin, (Op.)	6P (Fresh.).....	Bench Work in Wood 6P (Fresh.)
	Horticulture 1—4p.....	Forestry 2.
	Spanish or Latin, (Op.)	Spanish or Latin, (Op.)

#### Second Year

FIRST TERM.	SECOND TERM.	THIRD TERM.
English 5 (Fresh.).....	English 5 (Fresh.).....	English 5 (Fresh.)
Com. Arth. 5.....	Book-keeping, 5.....	Chemistry 4 (Sr. Prep.)
Soils & Crops 5 (Jr.)..	Stock Feeding 4 (Jr.)..	Pomology 2P.
Prin. Breeding 3 (Jr.)..	Pomology 2.....	Olericulture or Vegeta- Economic Ent. 2.....
Spanish or Latin, (Op.)	Ag. Chemistry 4 or 8P..	ble Growing 2—4P.
		Ag. Chemistry 5.
		Spanish or Latin, (Op.)

This course is designed to prepare young men to become practical farmers and ranchmen, and to be able to fill positions as foremen or superintendents of ranches and dairies. The course includes much of the work of the regular four years' course in agriculture, besides requiring a number of other studies which have been selected as specially valuable for the student. For information as to the character of the work in each study see discussion under the four years' course in agriculture.

### **TWELVE WEEKS COURSE IN AGRICULTURE AND HORTICULTURE**

There are many young men who for various reasons are unable to spend two or more years at college. Believing that a public institution should, so far as possible, meet the needs of all of our citizens, a special course of twelve weeks has been opened for young men who desire to take advantage of the opportunity for a short period of training. The work of the course is of a very practical nature. Only those lines have been selected that are thought to be of the most value to the student. The work consists almost wholly of lectures and field practice. The lectures consist of familiar talks on the theory of the subject, while the student will be expected to learn to do the work, by practice, under a trained instructor. For this purpose much time will be spent by the student in the orchard, garden, and field, in the greenhouse, and in the management of the hot beds and cold frames.

This course will be given each term of the college year with only sufficient variation in the subject matter taught to suit the seasons of the year.

The course in each term will continue twelve weeks. The first term's course will begin September 4, 1901. The second terms' course will begin December 2, 1901. The third terms' course will begin March 10, 1902.

*Requirements for Admission.*—Students entering this course must be at least sixteen years of age. There are no entrance examinations required.

FIRST TERM.	SECOND TERM.	THIRD TERM.
Orchard and Flower Garden, 15P.....	Greenhouse, Hot Beds Garden and Field, 15P.	
Lecture in Pomology 5.	Lecture in Vegetable	
Lecture in Live Stock 5.	Lecture in Economic	Growing 5.
English, Arithmetic or	Entomology, 5.....	Crops 5.
other studies 10.....	English, Arithmetic or	English, Arithmetic or
	other studies 10.....	other studies 10.

The following is a brief outline of the character of the work in this course :

*Practice Work*—The laboratory and field practice during the first term consists of picking, grading, packing, and shipping fruits; spraying and pruning fruit trees; planning and planting ornamental grounds and flower gardens; and observation lessons on plants and shrubs best suited to New Mexico. The work of the second term consists of propagation, potting, repotting, and care and management of greenhouse plants; making and management of hot beds and cold frames for starting plants, and for the production of winter flowers and vegetables for the home and for market; and other work in hand during this season of the year. Special attention is given to growing and preparing winter vegetables for market. The practice hours in the third term are mostly devoted to the vegetable garden and field. The work embraces laying off grounds, preparing seed beds, sowing, transplanting, irrigation, etc. So far as possible the work is taken up with a view to a knowledge of commercial vegetable growing.

*Pomology*.—The lectures in Pomology consist of practical talks on fruit-growing. The discussions embrace such subjects as selection, planting, and pruning fruit trees and vines; a study of varieties; and points on packing and shipping fruits.

*Economic Entomology*.—The lectures in this subject are intended to give students a fair knowledge of injurious insects and the best methods of destroying them. Familiarity with the characteristics and life history is gained by a study of the

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NOTE—The figures at the right indicate the number of hours work required each week.



insect in class and by locating them in the College orchards or neighboring commercial orchards.

*Live Stock.*—The lectures in this subject are intended to give the student a basis for the study of breeds and characteristics of animals.

*Soils and Crops.*—This subject comprises a discussion of soils in their relation to plant growth, germination of seeds under irrigation, classification of crops and their values, and related topics.

*English.*—This study is intended to assist those who desire to gain a correct knowledge of English.

*Arithmetic and other Studies.*—The student is allowed to elect arithmetic or other studies with the advise and consent of the professor in charge.

*Equipment.*—The farm connected with the College contains about 70 acres of land under irrigation. The orchard and grounds contain many varieties of apples, pears, peaches, plums, etc., and over 100 varieties of grapes in addition to other small fruits. The vegetable gardens, flower gardens, and greenhouse afford excellent opportunity for study and experiment. Buildings connected with the department serve for stabling the stock and for housing the farm machinery. The corral and grounds have a good water supply furnished by a wind-mill and storage tank. During the past year important additions of pure bred stock have been made. Constant additions are being made to the equipment in machinery and live stock.

The experimental work of the Station, carried on in connection with the work of the Department, serves as practical illustration to the students in agriculture.

The College is especially well equipped for work in *Soil Physics*, this being one of the prominent lines of investigation of the New Mexico Agricultural Experiment Station. The laboratory is supplied with electrical apparatus for determining salts in soils, electrical soil hygrometer and accessories, drying ovens, balances and weights, and the necessary



glassware and reagents for carrying on the investigations of the physical properties of soils and their salt content.

For the work in meteorology we have the usual instruments furnished voluntary observers and an anemometer in addition.

This summer we hope to add considerably to our equipment. Among the contemplated additions are a centrifuge for mechanical analyses, apparatus for measuring the amount of water applied in irrigation, and several self-recording meteorological instruments.

*Student Labor.*—In connection with the investigations of the Department there are many opportunities which will enable industrious students to use a certain amount of their time in practical work. This labor is paid for at the rate of from  $7\frac{1}{2}$  cents to 15 cents per hour. It may be added, for those who are interested, that a large amount of work of this nature could have been furnished to students the past year had their desires been known to the Professor in charge. Naturally work of this nature can be made an important aid to those who desire to pay part of their expenses while in College.

## BIOLOGY, GEOLOGY, AND PHYSICS

PROFESSOR WOOTON

### Biology

*Biology 1.*—All students in the regular college courses are required to take Biology during the Freshman year and to devote ten hours per week of laboratory work to the subject. The work of the first term will be an introduction to the fundamental principles of animal and plant life by means of lectures and text-book work, after which students will study types of all the larger classes of animals. Emphasis will be placed upon those features of animal anatomy which show most plainly the developmental history of the classes which the types represent and their relationships to each other.

The types studied during this term will be entirely invertebrate.

*Biology 2.*—The above course will be continued during the second term, the time being devoted to those forms which are important as showing the connection between the vertebrates and invertebrates, and the vertebrates, the latter receiving the major portion.

*Biology 3.*—The third term of the year will be devoted to the study of plant life following somewhat the presentation of the subject offered by Dr. Campbell in his *Evolution of Plants*.

The whole course in Biology is designed to be general and more or less elementary in character. It is intended to give the student a general view of animate creation and the relations existing between the various parts of it and so let him learn his own position as a member of this creation.

The method of work is a combination of lecture and laboratory work, with continual examination of material, taking of notes and making of drawings, with occasional essays upon biological subjects which must be read before the class.

*Elective Work.*—Courses in "Systematic Zoology," "Physiological Botany," "The Classification of the Flowering Plants," and "Economic Botany" will be offered by this department as electives to students qualified to take such work. Biology 1, 2 and 3 will be prerequisite to such courses, as well as some work in other sciences.

This work can generally be so arranged with the teacher, that students may do work in almost any line in which they are interested, and receive credit for any number of hours which they may have at their command aside from the regularly required work.

*Equipment.*—The laboratories of this department occupy rooms in the second story of the Science Hall. These laboratories are equipped with all apparatus necessary for the courses outlined above.

The department library is well supplied with books on all subjects relating to the work.

The herbarium contains several thousand plants, and additions are constantly being made. Advanced students, es-

pecially in systematic botany, will have access to it in connection with their work.

Considerable zoological material is now in the possession of this department, and will be at the command of advanced students.

### Physics

*Physics A.*—Junior Preparatory students will devote five hours each week during the first half of the year to this subject, using Shaw's *Physics by Experiment* as a text-book. The major portion of the time will be devoted to the fundamental conceptions of matter and force and the laws governing each and the application of these laws in the simpler machines.

Physics 1, 2, and 3.—Sophomores of all courses are required to devote one full year to this subject.

The first term will be devoted to the study of the general laws of matter and force, and the subject of heat; the second term, to sound and light; and the third term, to the subjects of electricity and magnetism.

Gage's *Elements of Physics* will be used as a text-book, with Ganot's *Physics* and Sylvanus Thompson's *Elementary Lessons in Electricity and Magnetism* as reference books. Particular stress will be laid upon the mathematical side of the subject, as being the best way to grasp its principles.

The Physics Department is supplied with a good laboratory and plenty of apparatus and the principles studied will be demonstrated in class. Students will be required to do two hours work per week throughout the year in the laboratory, performing experiments that require exact physical measurements.

### Geology

1. *Mineralogy.*—The first term of the Senior year will be devoted to the subject of mineralogy, using Dana's work on this subject as a reference book, and the collection of minerals in the possession of the department as a basis for the work. Most of the time will be occupied with work in determinative

mineralogy, using Foye's Handbook of Mineralogy as a laboratory guide.

Minerals of economic importance will receive most of the attention of this class, but the commoner rock-making minerals will be studied.

2. *Geology*.—All Seniors are required to take a course of five hours per week in general geology during the second term.

The work will cover the general principles of dynamical, structural, and historical geology as set forth by Scott in his Introduction to Geology.

3. *Geology*.—A course in Paleontology will be offered to students who have taken Geology I and sufficient work in Zoology and Botany to fit them for carrying on such work. Students taking this course will be credited with three hours per week for one term.

## CHEMISTRY

PROFESSOR GOSS

ASSISTANT PROFESSOR HARE

### Required Work

A. *Senior Preparatory Chemistry, third term*.—The Chemistry in the Senior Preparatory year consists of a study of the subject as outlined in an elementary text book. The work will be supplemented by frequent experiments performed before the class. The chemistry of this year is intended as a preparation for the different branches of science taught later. The time required for recitations is one hour four times per week.

1. *Junior Chemistry, first term*.—The work during the first term of the Junior year consists of a study of the principles of general inorganic chemistry as outlined in Remsen's "Introduction to the Study of Chemistry." The text-book work is supplemented by frequent exercises in the laboratory. The time required during this term is one hour daily.

2. *Junior Chemistry, second term*.—During this term, the work of the first term is continued and the subject of qualita-

tive analysis begun. The work during this term is principally in the laboratory. Each student is provided with a complete set of apparatus and reagents, and with a conveniently arranged locker, supplied with a combination lock, in which to keep his apparatus. The time required during this term is two hours daily.

3. *Junior Chemistry, third term.*—The work this term is entirely in the laboratory, being a continuation of the subject of qualitative analysis commenced the previous term. Upon the completion of this term's work, students are expected to be able to analyze ordinary compounds. The time required during this term is two hours, four times per week.

4. *Agricultural Chemistry, first term.*—During this term, chemistry as related to agriculture is given to students in the Agricultural course. The work consists of a text-book study of such subjects as animal nutrition, plant food, and fertilizers, as presented in Warington's "Chemistry of the Farm." The lectures occur three times per week, in the Senior year.

5. *Agricultural Chemistry, second term.*—During this term, laboratory work in the analysis of agricultural products, waters, soils, etc., is given to Senior students in the Agricultural course. The work occupies four two-hour periods each week during the term.

7. *Metallurgy.*—During the second term of the Senior year Metallurgy is required of regular students in the Mechanical and Civil Engineering courses. It is also given to students taking assaying. The work is presented in the form of lectures and recitations, which occur four times per week. The text used is Hiorn's "Text Book of Elementary Metallurgy". Besides the regular text-book work, a course of supplementary reading is also required of the students.

#### Elective Work

6. *Agricultural Chemistry, third term.*—In this term, the work of the second term in Agricultural Chemistry may be continued.

8. *Assaying, Dry Methods, first term.*—For the accommodation of those of our students who desire to take up this



branch, instruction is given during the first term in the fire assay of gold, silver, and lead ores. Each student is assigned furnaces, and is supplied with the necessary crucibles, scorifiers, material for making fluxes, etc. Besides other necessary apparatus, he also has the use of balances for weighing out charges, mixing fluxes, and weighing gold and silver beads.

9. *Assaying, Wet Methods, second term.*—During this term, a study is made of the quantitative determination of copper, iron, lime, silica, etc., by the best volumetric and gravimetric methods.

10. *Assaying, third term.*—The work during this term relates chiefly to the composition and metallurgy of ores. Students are encouraged to make original studies of methods for the extraction of metals from their ores, in order to determine which are most applicable and economical in particular cases.

The work in assaying is principally in the laboratory, but is supplemented by a course of reading in standard books on assaying, analytical chemistry, etc.

The time required during the year, of students taking assaying, is six hours per week. It will usually be possible, however, to arrange for extra work; and students are strongly urged to do so when possible, as the amount of knowledge gained in this subject depends almost entirely upon the time devoted to it in the laboratory.

Students taking assaying are also required to take the regular work in chemistry, geology, mineralogy and metallurgy.

Students will not be admitted to the course in assaying, who have not had sufficient preliminary training to enable them to carry the work.

11. *Elective Chemistry, Senior year, first term.*—For regular students who elect chemistry during the first term of the Senior year, the work consists of laboratory practice in general quantitative analysis. During this term, students receive



instruction in the use of the balance and in general quantitative manipulation. Each student is required to make some of the fundamental quantitative determinations, thus becoming familiar with quantitative processes by actual practice. The time required is six hours per week.

12. *Elective Chemistry, Senior year, second term.*—The nature of the work done during the second term of the Senior year is left largely to the choice of the student; but, in general, usually consists of work along some line of original investigation. The work, especially during the latter half of the term, should be along the line leading up to the thesis work to be taken up the next term. The work of this term is entirely in the laboratory. The time required is six hours per week.

13. *Thesis Work, Senior year, third term.*—During this term, Senior students, who elect chemistry for their thesis work, are required to take up some line of original chemical investigation, and prepare a paper on the same. The time required for this work is ten hours per week, during the term, but students usually find it necessary to put in about all their available time during the afternoons. The work is principally in the laboratory, supplemented by a course of outside reading. While but one term is required for the thesis work, it is much better to select the subject in the second term and devote a considerable portion of that term to the work.

14. *Post-Graduate Work.*—Advanced work in chemistry, leading to the degree of M. S., is offered to post-graduate students who elect work in the chemical department. The character of the work selected is left largely to the choice of the student, subject to the approval of the head of the department. The work taken up, however, must consist largely of original research along some line of chemical investigation. It practically amounts to a continuation of work of the same character as the thesis work of the Senior year, although, of course, the subject may be different.

### Equipment

The chemical department occupies all of the lower floor of the Science Hall, with the exception of one room. The college work and station work have separate quarters. Five good sized rooms, and a smaller store room, are used in the instruction of students, and three rooms and a store room, for the station work. A small brick building, located at a safe distance from the main building, is also used by the department as a store house for gasolene and other combustible and explosive substances.

The rooms set apart for use in the instruction of students are as follows:—

1. A large qualitative laboratory for students beginning the study of chemistry. This laboratory is fitted with work desks which are supplied with gas, water, and drain, and have drawers and lockers with combination locks. The qualitative laboratory also contains, among other things, a sink, and a fume closet for work in which noxious gases are present.

2. A quantitative laboratory for the use of advanced students. This laboratory is supplied with two entirely new, thoroughly equipped, work desks, fitted with gas and water pipes, a drain trough through the center, a bottle rack on the top, and drawers and lockers with combination locks. This laboratory also contains a first-class large fume closet and a sink.

3. A fire-proof assay laboratory, which contains six gasolene crucible furnaces and two muffle furnaces. This laboratory is also supplied with a Bosworth ore crusher, a sampling plate, a complete set of sieves, crucibles, tongs, cupel moulds, and other accessories necessary in a well equipped laboratory of this character.

4. A weighing room, opening into the quantitative and assay laboratories. This room is fitted with a substantial balance table mounted on brick piers in contact with the ground, thus insuring freedom from floor vibration. This

room is, at present, supplied with an Eimer and Amend gold-plated assay balance sensitive to the one two-hundredth of a milligram, two chemical balances, and a heavier balance for rough weighing. This room is also provided with a large table on which to mix assay charges, etc., and with a case for sample bottles.

5. A lecture room, supplied with a lecture desk, a sink, gas, blackboards, and other accessories.

6. A conveniently-located store room for chemicals and general laboratory supplies for students.

The laboratories used for the chemical work have brick walls, and wooden ceilings, fourteen feet high. Each laboratory is also supplied with one or more ventilating flues which aid in the removal of fumes and in the ventilation of the rooms. The general equipment of the laboratories has been very materially increased, and is modern and first-class in every particular.

The laboratories fitted up for the accommodation of the Experiment Station work contain, among other things, three work desks supplied with gas, water, and air exhaust pipes for rapid filtration, a commodious hood to carry off noxious gasses, apparatus for the determination of nitrogen by the Kjeldahl method, a titration shelf and system of burettes, and a first-class still for the preparation of distilled water. The Station equipment also includes a balance table mounted on brick piers in contact with the ground, a Herzberg and Kulhmann short beam automatic analytical balance, a Springer torsion balance, a Scheibler's polariscope, an imported mill for grinding samples, and about \$500 worth of platinum ware.

While the Station laboratory is not designed for the use of students, the work carried on there serves to illustrate actual practical analytical work.

The chemical department also has a collection of mineral specimens for class use, and quite a large department library of reference books and periodicals.

The gas supply for the department is furnished by a new, 200 light, Matthews gasolene gas machine, which is provided with an automatic mixer whereby the gas is kept uniform in quality.

The water supply for the department is furnished by a deep well on the college grounds, the water of which is of much better quality than most of the well waters of the valley.

### Fees

At the beginning of the work in chemistry in any year except the Senior Preparatory, each student will be required to deposit five dollars with the Registrar, to cover breakage of apparatus. At the close of the year, or upon withdrawing from the class, the balance of this deposit, after deducting cost of broken apparatus, will be returned to the student.

At the beginning of each term, each student taking furnace work in assaying will be charged five dollars to cover cost of gasolene and fluxes used. No part of this fee will be returned unless the student should withdraw before the end of the term. Besides the above fee of five dollars, each student taking furnace work in assaying will be required to deposit ten dollars at the beginning of each term, to cover cost of crucibles, scorifiers, and other apparatus used up or broken during the term. The balance from this deposit which is not used will be returned to the student at the end of the term. At the beginning of the wet work in assaying, each year, each student will be required to have on deposit with the Registrar, five dollars to cover cost of broken apparatus, as under the preceding paragraph. If, however, the student has a balance of five dollars, or more, from the deposit for furnace work in assaying, no additional deposit will be required.



The First Domestic Economy Class.

## DOMESTIC ECONOMY

PROFESSOR HORNING

*Senior Preparatory.*—A course in practical cookery will be given to young women during the second and third terms, six hours per week being given to the work, which will consist of three two-hour lessons, and will be known in the winter and spring terms as, *Domestic Economy B* and *A*, respectively.

The course will cover the principles underlying plain cookery, and will endeavor to prepare students for practical work in their homes.

*Junior Year.*—A more advanced course will be given in the Junior year, in which the time will not be wholly devoted to practical cookery, but some instruction will be given in the proper combination of foods, chemistry of foods, and the physiology of digestion. This course, *Domestic Economy 1, 2, & 3*, will run throughout the year.



*Elective Work.*—Any women students who are prepared for it will be given the option of electing more advanced work. This will consist in practical lessons in invalid cookery, lectures on diet in disease and home sanitation. These courses will be known as *Domestic Economy 4, 5, & 6.*

## RHETORIC AND LITERATURE

PROFESSOR BARKER

MISS BAKER

### Prescribed Courses

In the English work the time is divided equally between Composition or Rhetoric and Literature. As far as possible, the two branches are made to supplement each other.

The work in Rhetoric consists chiefly in writing themes. These are criticised by the instructor in private conference with the student, and the common grammatical and rhetorical errors committed in the themes, with the leading principles of composition involved, are discussed informally before the class. In these discussions all students are expected to take part.

In the study of Literature students are encouraged to form opinions of their own about what they read; and to express their opinions with intelligence, precision, and brevity. In addition to the regular course in Literature, certain outside reading of a literary nature is required of students in Rhetoric, but not more than one book a month. The books assigned are such as the students might read for their own pleasure.

English C, B, and A.—American Literature.—Two hours a week throughout the year, for students in the Senior Preparatory Class.

English 1, 2, and 3.—Rhetoric.—Five hours a week throughout the year, for Freshmen.

English 4, 5, and 6.—English Literature.—The History and Development of English Literature in outline.—Five hours a week throughout the year, for Sophomores.



English 7, 8, and 9.—Rhetoric and Literary Reading.—One hour a week throughout the year, for Juniors.

English 10, 11, and 12.—Rhetoric.—Two hours a week throughout the year, for Seniors.

### Elective Courses

English 13, 14, and 15.—Versification.—One hour a week throughout the year.—An attempt will be made to give practical instruction in metrical composition. This course will be accepted as an equivalent of the prescribed English 7, 8, and 9; but a student will not be admitted to the class unless in the judgment of the instructor he shows some natural aptitude for the work.

English 16, 17, and 18.—Journalism.—Two hours a week throughout the year.—The course will consist chiefly of regular work in composition, with informal discussions of the rudimentary principles of journalistic writing. The greater part of the written work done will be published in the college or local papers, or in a manuscript periodical to be edited by the class. This course will be accepted as an equivalent of the prescribed English 10, 11, and 12.

## HISTORY AND PHILOSOPHY

PROFESSOR HADLEY

### History

The purposes aimed at in the teaching of history in this department are: (1) to acquaint the student with the most important facts of history; (2) to train him to interpret these facts into the prevailing thought of the people at the time of the events; and (3), incidentally, to direct the student's attention to such standard literature as will assist him to get a vivid idea of the life of the time of which it treats.

The work in history embraces the following courses:

General History—Four hours per week, by Senior Preparatory students, and required of all candidates for admission to the Freshman class.

History of Civilization—This course (*History 5, 6, & 7*), running throughout the Senior year, is described in connection with the work of the department of Political and Economic Science, which see.

History of Education—elective—five hours per week during the first term of the school year.

History of England—elective—five hours per week during the first and second terms.

Detailed study of a Period of American History, elective, five hours per week, during the third term.

*General History*.—(The text used is Myer's *General History*):

History C.—The most important points in the history of oriental peoples; the same of Greece and of Rome to the close of the Punic wars. Fall term.

History B.—The history of Rome complete, and the period of Mediæval history. Winter term.

History A.—An outline of the Modern period of history. Spring term.

*History of Education* (*History 1*).—This course is elective, and may be taken by any student above the Freshman class. From a new point of view it affords a valuable review of many topics passed over in the study of *General History*. It is of value to the general scholar, but is of special interest to all who contemplate teaching. The subject is taught in such manner as to keep constantly in mind the relations existing between the demands made upon the citizen and the kind of training—education—given to the youth. Considerable attention is given to the theories held by educational reformers, and to great educational movements. Together with courses *Philosophy 2* and *Philosophy 3*, this course makes a year's work in pedagogy. Fall term.

*English History*, elective, may be taken during the first and second terms of the school year. Care is taken to have the student become familiar with the growth of the English nation, and to observe carefully the steps by which it has acquired political and religious freedom. The guiding texts

are Montgomery's Leading Facts and Green's Short History of the English People. This subject is pursued as courses:—

History 2.—The work as presented in Montgomery's Leading Facts through the period of the reign of the Tudors, and the careful reading of selected and related portions of Green's Shorter Course.

History 3.—The same work continued, the text mentioned.

*American History, a Period of*, (History 4)—elective—may be taken five hours per week during the third term. It is adapted to students with the advancement of the Sophomore class. The purpose is to give a detailed historical knowledge of some one period. In one year it may be the study of American Colonial Institutions to the adoption of the Constitution; in another, it may be the History of the United States Constitution; and in another, Political and Institutional History of the United States since 1798.

### Philosophy

*Applied Psychology* (Philosophy 1)—elective—may be taken five hours per week during the second term of the school year, by students of advancement equal to that of the Sophomore year. The purposes are (1) to introduce the student to the contemplation and study of the phenomena of spirit in contrast with the study of those of matter; (2) to introduce him to a study of the intimate relations existing between mind and body; (3) to acquaint him with the elementary and fundamental phenomena of mind-sensation, attention and discrimination, perception by the sense, etc.; (4) to constantly show how this knowledge may be applied to the solution of the problems of practical life and especially to the teacher's problems. Some knowledge of psychology is not only valuable to the person of general culture, but it is necessary. It is of especial interest to those who contemplate teaching. All correct methods of teaching are derived from a knowledge of mind and the processes of mental development. This course and that in the History of Education (History 1, *supra*), and the course in the Theory and Practice of Education

Philosophy 2, *infra*), make a year's work in pedagogy, which, it is believed, will be valuable for those who are to teach.

*Theory and Practice of Education* (Philosophy 2).—This is a double course, one hour a week being devoted to a discussion of the fundamental principles of education, (Philosophy 2a); and the other four hours to a practical application of pedagogical principles in the teaching of some elementary subject, (Philosophy 2b). During the year 1901-1902, the subject matter of the course Philosophy 2b will be arithmetic. Experience shows that many graduates of colleges, when they enter upon practical life, find themselves deficient in the ready application of some of the necessary branches of study which they pursued during their first years at school. This is especially true of arithmetic, and the teacher, the salesman, or the accountant finds that he must acquire proficiency after he has entered upon his labors. The subject of arithmetic will be thoroughly reviewed in such manner as to meet this need. Every conceivable application of the subject will be kept in view.

*Logic* (Philosophy 3).—An elective course in inductive and deductive logic, given in the fall term, is especially designed for those who do not pursue the study of the higher mathematics, and who it is thought may be especially benefited by a direct critical examination of the forms of thought,—something that is less necessary for those who receive a great deal of indirect training in formal thinking through their study of mathematics and the other so-called exact sciences.

## MATHEMATICS AND ASTRONOMY

PROFESSOR HAGERTY

### Mathematics

C, B, A. *Algebra*. Five hours throughout the year. Involvement, evolution, radicals, quadratics, ratio, proportion, variation, progressions, imaginary quantities, inequalities, indeterminate equations, logarithms, permutations and combinations, and the binomial theorem (positive integral exponent). Required for admission to the Freshman class. The

completion of Milne's Academic Algebra to the binomial theorem inclusive, or an equivalent, is a sufficient preparation for admission to the Freshman class.

1, 2. *Geometry, Plane.* Five hours, first and second terms. Required of all Freshmen. Nearly one-third of the time is given to original exercises.

3. *Geometry, Solid.* Five hours, third term. Required of all Freshmen.

4. *Trigonometry, Plane,* including an introduction to *Spherical.* Five hours, first term. Required of all Sophomores.

5. *Algebra.* Five hours, third term. Variables and limits, undetermined coefficients, binomial theorem (any exponent), series, and theory of equations. Required of Sophomore students in Engineering; elective for all other students who have passed in 1, 2, 3, and 4.

6. *Analytic Geometry.*—Five hours, first term. Loci and their equations, straight line and circle, transformation of coordinates, parabola, ellipse, hyperbola, general discussion of the equation of the second degree having two variables, discussion of a few of the higher plane curves, and loci in space. Required of junior students in Engineering; elective for all other students who have passed in 1, 2, 3, 4 and 5.

7, 8. *Calculus, Differential and Integral.*—Five hours, second and third terms. Required of junior students in Engineering; elective for all other students who have passed in 5 and 6.

#### Astronomy

1. *General Astronomy.*—Five hours, first term. Recitations, lectures, and use of portable telescope, with  $4\frac{1}{2}$  inch objective, and magnifying powers ranging from 50 to 400. Required of junior students in the General Course; elective for all other students who have passed in Mathematics 1, 2, 3, and 4.

Course 2 and 3.—Continuation of course 1. One hour, second and third terms. The greater part of this work will



consist of evening observations, two hours of which is considered the equivalent of one hour lecture or recitation. Required of junior students in the General Course; elective for all other students who have passed in 1.

### Equipment

This department has a portable equatorial telescope with  $4\frac{1}{2}$ -inch objective and magnifying powers ranging from 50 to 400, a surveyor's transit with solar attachment, planisphere, star lantern with slides, field glasses, star atlas, protractors, trigonometer, 24 inch slated globe, and Kennedy's dissected geometrical blocks.

The department library contains many valuable books of reference, and several periodicals.

## MECHANICAL ENGINEERING

PROFESSOR BRADY

ASSISTANT PROFESSOR MILLS

MR. SAGE

Instruction in this course is given by lectures, recitations, and practice, so combined as to constitute a symmetrical course of study. The endeavor is to provide the student with a broad foundation of general and theoretical knowledge, together with a liberal amount of practice in the line of his chosen profession.

Much time is necessarily devoted to higher mathematics and to technical subjects; yet certain fundamental studies, necessary to a broad and liberal education, such as physics, chemistry, biology, languages, literature, political economy and history are amply provided for.

The student is given a thorough training in the theoretical branches underlying the science of machines, together with a clear understanding of the practical construction of mechanical devices. In addition to the advanced mathematical and general studies common to other courses, this course includes instruction in mechanical drawing, descriptive geometry, theoretical and applied mechanics, hydraulics,



engineering structures, metallurgy, electrical engineering, strength of materials, mechanism, machine design, steam engineering and shop practice, and the student also has the privilege of several electives.

*Free-hand Drawing.*—The importance of free-hand drawing as a discipline for the powers of observation, can hardly be overestimated. It educates the eye to note accurately all details of position and form, and trains the mind and hand to reproduce correctly what the eye sees. Elementary free-hand drawing is begun in the lower grades of the preparatory school, and advanced free drawing (Mech. Eng. B & A), is given during the last two terms of the Senior Preparatory or Sub-Freshman class.

*Mechanical Drawing.*—All engineering students take Mechanical Drawing during the Freshman year (Mech. Eng. Courses 7, 8, and 9) and one term (Mech. Eng. Course 10) of the Sophomore year. This subject embraces instruction in the use and care of drafting instruments, exercises in geometrical construction, lettering, plane projections, shading and coloring; followed by detail and assembled working drawings of machinery with tracings and blue prints therefrom.

During one term each of the Sophomore (Mech. Eng. Course 11) and Junior (Mech. Eng. Course 12) years, Mechanical Drawing is merged into Machine Design, of which it forms an important part, and affords constant opportunity for further practice in making drawings of standard types of machinery. The work in this subject consists chiefly in the design of the elements of machinery, such as bolts, rivets and riveted joints, journals and bearings, pulleys, gears, etc.

*Descriptive Geometry* (Mech. Eng. Course 13) is taught during the second term of the Sophomore year. In this the principles of orthographic projection, development of lines and surfaces, etc., are fully discussed in the class room; and a great variety of problems, illustrating both general and special cases, are solved and constructed in the drafting room.

*Elementary Mechanics.*—In this subject, (Mech. Eng. Course 14) the general laws of statics and dynamics are studied with reference to solids, liquids and gases; and the fundamental principles are applied to the solution of a wide range of problems.

*Mechanism.*—Under this head (Mech. Eng. Course 15) are studied the principles underlying the action of the elementary combinations of which all machines are composed; the communication of motion by gear-wheels, belts, cams, screws, linkwork, etc.

*Strength of Materials.*—This subject (Mech. Eng. Course 16) embraces a study of the characteristics, method of manufacture, and useful properties of the various materials of construction; and a mathematical investigation of their strength, elasticity, and other physical properties.

*Hydraulics* (Mech. Eng. Course 17) includes the study and application of the principles of the subject to the various problems involved; such as the flow of water through orifices, short and long tubes, conduits, and in open channels; gauging streams, measurements of water power, etc.

*Steam Boilers.*—Under this head (Mech. Eng. Course 18) the principles underlying the construction of the various forms of steam boilers are studied. Attention is given to the various details in their design and operation, such as the size of flues, thickness of plates, style of riveting, bracing, the amount of grate and heating surfaces, etc.; also the various attachments.

*Engineering Structures.*—This study (Mech. Eng. Course 19) embraces a study of the design and construction of foundations and superstructure, the selection of materials, superintendence, specifications, etc.

*Steam Engine.*—The student makes a study (Mech. Eng. Course 20) of the general principles of the steam engine and of the various types in common use, and investigates the many problems relating to their structure and efficiency.

*Metallurgy.*—This includes a study (Chemistry 7) of various fuels and refractory materials; principle iron ores and

their reduction according to modern methods and the processes employed in the preparation of the finished products.

In *Electrical Engineering* (Mech. Eng. Course 21) the student is drilled in the fundamental principles of electric power generation and the application of electricity to lighting, street railway and mining work.

*Roofs and Bridges.*—In roofs, bridges and arches (Mech. Eng. Courses 22) the student will be given a drill in determining stress by both the graphical and analytical methods, and in making drawings of the details of construction.

*Analytical Mechanics* (Mech. Eng. Course 23) embraces a study of the laws of equilibrium, motion, work and energy, as applied to particles and rigid bodies; also a study of the center of gravity and the moment of inertia.

*Engine and Boiler Trials.*—In this subject (Mech. Eng. Course 24) the student makes a study of the principles and the methods involved in determining the efficiency of engines and boilers and applies the same in the engineering laboratory.

*Shop Practice*, offering, as it does, practical illustrations of the precepts taught in the class room, is a most essential part of the Mechanical Engineering course, and this work is given a prominent position. The work is begun and is required of all male students in the second and third terms of the last preparatory year, and continues through seven terms of the regular engineering course. This work embraces carpentry (Mech. Eng. Course D), wood turning (Mech. Eng. Course C), blacksmithing (Mech. Eng. Course 25), foundry practice (Mech. Eng. Course 26), pattern making (Mech. Eng. Course 27 and 28), and general machine work (Mech. Eng. Course 29 and 30). The manual training is supplemented by lectures on the various tools and machines used in the laboratory.

*Equipment.*—The department has two commodious buildings devoted to its work. One has rooms for a blacksmith shop, foundry and storage. The other contains two recita-

tion rooms and a hall, an engine and boiler room, and rooms for wood work and for machine work.

In the forge room are eight forges of the latest model, with improved underground arrangements for the blast and exhaust pipes. Each forge is fitted with a full set of tongs, hammers, swages, fullers, etc. An 18-inch drill press and a punching and shearing machine form part of the outfit of this section.

The wood room has seven turning lathes, one combination rip and cross-cut circular saw, one Fox trimmer, a forty-inch grind stone, one 18-inch x 6 inch surface planer, one No. 3 patent strain scroll saw, and a good supply of small tools and appliances.

In the machine room there are one 16-inch x 6-foot tool room lathe with compound rest and taper attachment, one 14-inch x 8-foot standard engine lathe, one 24-inch x 24-inch x 6-foot planer, one 22-inch power drill press, one improved double wheel emery grinder; also a large number and good assortment of drills, chucks, small tools and machine attachments. A 12-H.P. 250 volt dynamo, and an 8-H.P. motor with switch-board instruments, a standard steam gauge tester, an air pump and reservoir, steam indicators for steam and oil engine testing, a gas meter, and two planimeters also belong to the machine room equipment. A well arranged tool room contains an assortment of supplies and special tools for general work.

The power equipment consists of one 40-H.P. tubular boiler, feed water purifier, a duplex pump, a deep-well pump, one 8-H.P. Shipman engine, one 30-H.P. Weston automatic engine, and a 13 H.P. oil engine.

*Surveying.*—The instruction in this subject (Surveying 1), will be such as to render the students familiar with the principal instruments and methods used in plane, topographical, and other forms of surveying. Levels will be run, surveys made, notes plotted and areas computed. Students will have practice in determining the true meridian and latitude, by observations of the north star and of the sun.

The surveying equipment consists of a surveyor's compass, two transits, one of which has a gradienter and solar attachments, engineer's level plane table, aneroid barometer, hand level and clinometer, optical square, pantograph, chains, tapes, leveling rods, poles, pins, etc. A current meter, hook gauge, and other instruments are available for work in hydraulics.

An excellent department library, containing standard works pertaining to the engineering professions, is accessible to students.

*Thesis.*—As a condition of graduation, each senior in the engineering course must prepare an acceptable thesis, which will remain the property of the college.

*Deposits.*—Students taking any of the practice work (exclusive of Chemistry) in the Engineering Course, will be required to deposit at the beginning of the work each year five dollars, to cover breakage or damage, and to make additional deposits at any time it becomes necessary to meet the expenses so caused. At the end of the year or on completion of the work, the amount not forfeited will be returned. For fees for the Chemical Course, see the description of the Chemical Department.

#### **A Two Years Course in Practical Mechanics.**

The course is established for the benefit of those wishing to specialize in Manual Training operations or who have not the time to take the regular College course, requiring from four to six years. While there are no detailed educational requirements for admission to this course, the student must be at least sixteen years of age and show his fitness for the work.

It is not the intention to teach the trades in this course, but opportunity is given during the second year to specialize in either wood or iron work, and this, taken with the drawing and academic work required, will fit the student for practical work fully as well as time spent as an apprentice.

During the course students will complete the Practice work required of regular students of the Mechanical En-



gineering course, and besides this they are required to take enough academic work, for which they are fitted, to make a minimum of 16 hours work per week.

The fees for this are the same as for the regular Mechanical Engineering Course.

## TWO YEARS COURSE IN PRACTICAL MECHANICS

### First Year

FIRST TERM	SECOND TERM	THIRD TERM
Free Hand Drawing, 2 P Geometrical Drawing, 4 P Wood Turning, 6 P English, 2-4 or 5 Mathematics, 4 or 5 Elective, 4 to 8	Free Hand Drawing, 2 P Geometrical Drawing, 4 P Forging, 6 P English, 2-4 or 5 Mathematics, 4 or 5 Elective, 4 to 8	Free Hand Drawing, 2 P Mechanical Drawing, 4 P Carpentry, 6 P English, 2-4 or 5 Mathematics, 4 or 5 Elective, 4 to 8

### Second Year

FIRST TERM	SECOND TERM	THIRD TERM
One of: Carpentry, 6 P Bench Work in Iron, 6 P Pattern Making, 6 P Machine Work, 6 P Foundry Practice, 6 P Drawing, 4 P English, 2-4 or 5 Mathematics, 4 or 5 Elective, 5 to 9	One of: Carpentry, 6 P Forging, 6 P Pattern Making, 6 P Foundry Practice, 6 P Drawing, 4 P English, 2-4 or 5 Testing Materials, 4 P Mathematics, 4 or 5 Elective, 3 to 8	One of: Carpentry, 6 P Forging, 6 P Pattern Making, 6 P Foundry Practice, 6 P Machine Work, 6 P Drawing, 4 P English, 2-4 or 5 Mathematics, 4 or 5 Elective, 5 to 9.

## POLITICAL AND ECONOMIC SCIENCE

1. *Political Economy*.—The subject, an exposition of the general principles of economics, will be developed, in the main, by means of assigned readings and oral discussions, with occasional lectures. Davenport's "Outlines of Economic Theory" will be the handbook used. Collateral readings on special topics will be assigned to the several members of the class, upon which they will be required to report.

2. *Outlines of American Law*.—Using Walker's "American Law" as a handbook, the main outlines of American law will be presented, with special attention to subjects—contracts,



for instance—as are likely to be of practical importance in life to any man or woman making his or her way in the world. In introducing the subject, an effort will be made to show our legal system in its proper historic setting. The subject will be presented by means of assigned readings, comment and discussion. This is an elective course.

*History of Civilization* (See History 5, 6, 7).—This course (which includes all the required work in Political Science) is continued throughout the Senior year, the class meeting five times a week. In it the difficult attempt is made to present an outline of the progress of human culture from the earliest times to the present day; considering (1) the economic life of man, his (2) political and (3) religious institutions, and (4) the development of the human mind as it shows itself in philosophy and pure science; paying careful attention throughout to the useful and fine arts (architectural, plastic, pictorial, and literary) in and through which man's attainments and aspirations have found expression. The subject is developed by means of lectures, assigned readings, written reports, and oral discussions.

The text-books and principal reference books used in the course are:

Tylor, *Anthropology*; Morris, *Civilization, An Historical Review*; Sheldon, *General History*; Wilson, *The State*; Cunningham, *Growth of English Industry and Commerce*, Thatcher and Schwill, *Europe in the Middle Ages*; Emerton, *Mediæval Europe and Introduction to the Middle Ages*; Giddings, *Principles of Sociology*, and *Histories of Art and Architecture*; etc.

#### DEPARTMENT OF MUSIC

Arrangements have been made so that all students who desire to take either instrumental or vocal music can do so in a department that is self-supporting but that is under the general control of the president and faculty of the college.

Instrumental music is at present confined to the piano

and organ, and a strictly classical course will be taught, all lessons being based on thorough technical exercises.

Pianos will be placed at the College and the Women's Hall for the benefit of pupils.

Fees, 75 cents and \$1.00 a lesson.

## SPANISH

MR. SUTHERLAND

Two years work in Spanish is required of all students who do not elect Latin, and a third year is elective. For the Engineering students the prescribed work comes in the Senior Preparatory, or Sub-Freshman and Freshman years; for other students, in the Freshman and Sophomore years. The two years of prescribed work are designated Spanish 1, 2, and 3, and Spanish 4, 5, and 6. The elective courses are designated Spanish 7, 8, and 9.

*Spanish 1, 2, 3.*—Five hours per week throughout the year. De Tornos's Combined Spanish Method and Worman's Readers, after the natural or Pestalozzian method, are the texts used, with numerous authors as sight and parallel reading. As soon as sufficient vocabulary is acquired, class conversation is begun and is continued through the whole course.

*Spanish 4, 5, 6.*—Five hours per week throughout the year. De Tornos's, Matzke's Reader, Capitan Veneno, and Knapp's Readings are the texts, with *Misterio*, *Don Quixote* and other Spanish novels and dramas as outside readings. Knapp's and Garner's Spanish Grammars and Traub's Spanish Verbs are used as references.

*Spanish 7, 8, 9.*—Five hours per week throughout the year. This is the elective course to general students, but is required of students in Spanish stenography. It is especially designed as a preparation for commercial use, and consists of correspondence, conversation, sight-reading, spelling, dictation and translation in both languages, etc.

The equipment in Dictionaries, technical and general, manuals of correspondence, etc., is complete.

Owing to the fact that there are so many Spanish-speaking people in the vicinity, this College is especially favored in being able to offer exceptional facilities outside the class-room as well as within, for a practical acquirement of the language. A number of students have derived great benefit by getting roommates who speak Spanish and are thus enabled to advance with rapidity and precision.

### LATIN

MR. SUTHERLAND

PROFESSOR BARKER

Latin C, B, and A.—Five hours a week throughout the year, for students in the Senior Preparatory class.—Prescribed for all students except those taking Engineering courses, who are required to elect either Latin or Spanish. A study is made of the common inflected forms and of those Latin roots that occur frequently in the English language, having in view particularly the special needs of the science student. Collar and Daniel's First Latin Book is used as a text. The Roman pronunciation is followed.

*Latin 1, 2, 3.*—Five hours per week throughout the year. Collar and Daniel is continued from Latin A. Caesar, Nepos, Jones's Prose Composition.

*Latin 4, 5, 6.*—Five hours per week throughout the year. Cicero, orations and letters; Vergil, Aeneid; Jones's Prose Composition, sight reading; Prosody Jones's Prose Composition.

**DEPARTMENT OF STENOGRAPHY**

MR. LESTER, Principal

PROFESSOR BARKER

MR. SUTHERLAND

MISS MACGREGOR

**English Stenography**

To meet the demand for instruction in stenography and typewriting, the above department is maintained in the College. To avoid interference with the regular college work, the work of this department is kept distinct, with certain requirements, and a definite course of study.

*Requirements for Admission.*—For entrance to the course in English Stenography, students must be at least sixteen years of age. The average age of the enrolment in this department, however, is usually much higher than this. For last year, the average was 22 years. Graduates of any commissioned high school in the Territory will be admitted without examination. All other applicants must show that they possess the required ability in English to enter the Freshman English class of the regular college course. See page 39.

No guarantee is given to any student pursuing these courses that he will secure a position upon completion thereof. There is, however, little doubt that any student satisfactorily completing a required course will be able to take a position, and no competent graduate of the department has yet failed to do so.

*Equipment.*—The department is equipped with eight typewriters, Remington and Smith Premier machines. There are also the necessary appliances for the required work under office practice.

It is important that students enter this department promptly at the beginning of the courses. It is seldom that one who enters late is able to complete the required work satisfactorily. No provision can be made for commencing the work of a course at any other time than as provided. The course of study in English Stenography is as follows:

**A Course in English Stenography**

FIRST TERM	SECOND TERM	THIRD TERM
Stenography 1, 10 hours Typewriting 1, 5 hours English 1, 5 hours	Stenography 2, 10 hours Typewriting 2, 5 hours English 2, 5 hours	Stenography 3, 10 hours Typewriting 3, 5 hours Office Practice, 5 hours

*Stenography.*—Stenography 1, in the first term of this course, is elementary in character, being a thorough study of the principles of shorthand. Stenography 2, in the second term, covers word signs and outline drill; and, in the third term, Stenography 3 consists of advanced grade work, introducing a good deal of business and other dictation.

Text-books: Graham's Standard Phonography, revised edition; Graham's First and Second Readers and Amanuensis Practice.

*Typewriting.*—This work covers fingering, touch, copying, letter-writing, legal and commercial forms, typewriting from dictation, mechanism and care of the machine, speed exercises, and transcription from shorthand notes. The four-finger touch method is used, with blank key-board. Work absolutely free from errors is required. Opportunity is afforded students for work on both single and double key-board machines.

Text-book: Torrey's Practical Typewriting.

*Office Practice.*—This work, occurring in the third term, covers letter-writing, indexing and filing, proof-reading, duplicating and manifolded. A small charge is made for material used.

**English-Spanish Stenography**

The experience of past years has shown conclusively that a strong and growing demand exists for competent English-Spanish stenographers. The conditions existing in this locality and institution are so favorable for work in English-Spanish stenography that they may be said to be almost unique. The calls upon this College for such stenographers during the past few years have far exceeded the supply;



although these calls come principally from Mexico, there is an increasing demand in the United States and the newly acquired Spanish-speaking possessions, and it is believed that the business opportunities open to competent English-Spanish stenographers are most desirable.

For admission to this course students must show that they are prepared to complete the course within one year. To do this, some previous knowledge of both English shorthand and the Spanish language is desirable and usually necessary. The course in Spanish stenography is as follows:

### A Course in Spanish Stenography

FIRST TERM	SECOND TERM	THIRD TERM
English 1, 5 hours Special Work, 5 hours Adv. Stenography 4, 1 hour Commer. Span. 7, 5 hours Typewriting 4, 5 hours	English 2, 5 hours Spanish Stenog. 7, 5 hours Adv. Stenography 5, 1 hour Commer. Span. 8, 5 hours Typewriting 5, 5 hours	English 3, 5 hours Spanish Stenog. 8, 5 hours Adv. Stenography 6, 1 hour Commer. Span. 9, 5 hours Typewriting 6, 5 hours

*Stenography.*—Stenography 4, 5 and 6 in this course is advanced work in English stenography, and consists of rapid dictation and business forms. Stenography 7 and 8 is the work in Spanish stenography, during which the principles of the text-book used are first gone over, followed by work in Spanish dictation.

*Text-book:* Lester & Barker's English-Spanish Phonography.

*Special Work.*—Under this head provision is made for special work in commercial English, to thoroughly train Spanish-speaking students; or for special work in Spanish, in the Freshman or Sophomore classes, for those whose knowledge of that language is not sufficient.

*Typewriting.*—Typewriting 4, 5 and 6 is principally English and Spanish transcription work, with such advanced work as the time allotted will permit.



## THE PREPARATORY DEPARTMENT

MR. RICHARDS, Principal

MISS COMBS

MISS BLAKESLEY

MRS. BROWN

In planning the work of the college, we have been obliged to recognize that in the Territory of New Mexico, with its vast extent and scattered population, the opportunities for secondary instruction are very meagre; but unfortunately this is not the whole truth. A considerable number of the citizens of the territory have not at home any school opportunities for their children, and a great proportion of the schools of the territory do not pretend to carry their pupils beyond the most elementary stage of instruction; while many of those that do, nominally, the work of the higher grades of the common school, do it so poorly that their pupils are wholly unprepared to do successful work in high school, or even upper grammar grades.

To meet the needs, therefore, of a larger number of the youth of the territory who earnestly desire to avail themselves of the educational opportunities afforded by the college, but who are unprepared to enter its classes, a preparatory department is carried on in connection with the institution, the work of which begins at a point where the work of the public schools, except in the larger towns, usually breaks down.

Besides its regular classes, there is a special class designed to meet the needs of those persons of somewhat mature age who, through lack of early opportunities, are not prepared to enter the regular collegiate or preparatory classes, but whose maturity of mind enables them to make more rapid progress than can be made in the regular preparatory classes; and of those Spanish-speaking students (still a large element in our population) whose educational qualifications would admit

them to a regular class if their command of English were greater. The course of study for this class cannot be definitely outlined. Each pupil, however, will be prepared as quickly as possible to enter a regular class, and tentative promotions will be made at any time upon the recommendation of the teacher in charge.

For admission to the special class candidates must be at least sixteen years of age or must possess all the requirements for admission to a regular class except a sufficient knowledge of the English language.

For admission to the lowest regular (C) class of the preparatory department candidates must give satisfactory evidence or having completed work as follows:

1. Arithmetic,—an equivalent of the work covered by White's Complete Arithmetic to Common Fractions (p. 47);
2. Language,—Elementary Language Work;
3. Geography,—an equivalent of the work covered by Mauray's Elementary Geography;
4. Reading,—an equivalent of the work covered by McGuffey's Third Reader;
5. Spelling and Writing,—an elementary knowledge of these subjects.

For entrance to the higher classes candidates must give satisfactory evidence of having completed the work of grades below the class they seek to enter.

Strict adherence to these requirements will be enforced.

A system of manual training was partially introduced into the work of this department at the beginning of the past year with considerable success. It is expected that the complete system will be used during the coming year. It will then include free-hand drawing and designing, clay modeling, and wood carving; and some good results are expected. Some informal work will be done, also, in vocal music.

A plan of self-government has been in operation during a portion of the past year, which has, we believe, aided to quite an extent the development of those qualities necessary to good citizenship. This plan, as improved in the light of our experience, will be followed during the coming year.

## COURSE OF STUDY OF THE PREPARATORY DEPARTMENT

## Advanced Division

## SENIOR PREPARATORY CLASS\*

FIRST TERM	SECOND TERM	THIRD TERM
Algebra, 5 General History, 4 English, 2 Latin (optional with Span. for Engineering students), 5 Wood Turning, 6 P or Domestic Economy, 6 P	Algebra, 5 General History, 4 English, 2 Latin or Spanish, 5 Free-hand Drawing, 2 P Carpentry, 6 P or Domestic Economy, 6 P	Algebra, 5 General History, 4 English, 2 Latin or Spanish, 5 Elementary Chemistry, 4

\* NOTE.—The Senior Preparatory Class is taught by the College instructors, not by the teachers of the Preparatory Department, and the students are under the immediate jurisdiction of the College faculty, instead of under that of the principal of the Preparatory Department.

## Junior Preparatory Class.

## FIRST HALF-YEAR

Algebra  
Grammar and Composition  
Arithmetic  
Civics  
Physics  
Manual Training

## SECOND HALF-YEAR

Algebra  
Grammar and Composition  
Arithmetic  
Physical Geography  
Physiology  
Manual Training

## Elementary Division

## A CLASS

Arithmetic  
Grammar and Composition  
United States History  
Reading  
Spelling  
Writing  
Manual Training

## B CLASS

Arithmetic  
Grammar and Composition  
Geography  
Reading  
Spelling  
Writing  
Manual Training

## C CLASS

Arithmetic  
Grammar  
Geography  
Reading  
Spelling  
Writing  
Manual Training

## SPECIAL CLASS

The course of study for this class cannot be definitely outlined, but the work will be such as to prepare students for a regular class as quickly as possible.

## MATERIAL EQUIPMENT

### The Main Building, or College Hall



Down the Walk.

The main building is a fine brick structure of two stories and basement. It is trimmed with stone and has a very heavy stone foundation. It is well built, nicely finished, and cost about \$25,000. It contains thirteen rooms, all of which are furnished and in constant use. The building is well supplied with gas and water. On the first floor are the library and the president's and the registrar's offices, as well as a number of recitation rooms. On the second floor, besides several class rooms, is McFie Hall, which is used for class exercises, lectures, and similar purposes, and will seat a large audience.

### The Library

The library and reading room is of fair size. At the beginning of this academic year the library contained about 5,000 bound volumes, and a very large number of pamphlets; including good dictionaries, encyclopædias, and books of reference, in addition to the numerous scientific works used by

the special departments. New books are constantly being added.

The following periodicals are either on the desks of the reading room, or in the offices of the special departments, and are accessible to students:

American Agriculturist, American Amateur Photographer, American Chemical Journal, American Machinist, American Florist, American Journal of Psychology, American Naturalist, Analyst—London, Atlantic, Bookman, Birds, Book-keeper, Botanical Gazette, Bulletin Torrey Botanical Club, Business, Cassier's, Catholic World, Century, Chemical News, Chicago Tribune, Correct English, Cumulative Index to Periodicals, Current History, Educational Review, Electrical World and Engineer, Engineering and Mining Journal, Engineering News, Field and Farm, Forester, Forum, Foundry, Gardening, Harper's Monthly Magazine, Harper's Bazar, Harper's Weekly, Irrigation Age, Journal Association Engineering Societies, Journal American Chemical Society, Journal London Chemical Society, Journal Education, Journal of Pedagogy, Ladies' Home Journal, Land of Sunshine, Literary News, Library Journal, McClure's Magazine, Masters in Art, Mathematical Gazette, Mining and Scientific Press, Monthly Cumulative Index, North American Review, Outlook, Orange Judd Farmer, Pacific Rural Press, Phonographic Magazine, Pittonia, Popular Astronomy, Public Opinion, Publishers Weekly, Puck, Review of Reviews, Rural New Yorker, St. Nicholas, Saturday Evening Post, Science, Scientific American and Supplement, Scribner's Magazine, Stenographer, Typewriter and Phonographic World, Youth's Companion.

The following newspapers are taken by the library, New York Herald and Chicago Daily Tribune.

The following newspapers are furnished gratuitously by the publishers:

Albuquerque Citizen, Baltimore Weekly Sun, Carlsbad Argus, Carlsbad Current, Capital, Santa Fe; Colfax County Stockman, Dona Ana County Republican, El Republicano, La



Voz del Pueblo, Las Vegas Republican, Las Vegas Optic, New York Weekly Tribune, Pecos Valley Stockman, Public Ledger, Roswell Register, Santa Fe New Mexican.

During the past year the open-shelf system has been introduced in the library. This gives the students free access to the books. Students also have the use of numerous agricultural and horticultural papers which are kindly furnished by the publishers to the Experiment Station library in exchange for the Station bulletins.

### **Science Hall**

This is a large two-story brick building, situated to the north of the Main building. It contains eleven large rooms, and five smaller ones, besides large hallways. The lower floor is used mainly by chemical department, while the upper is occupied by the departments of zoology, entomology, botany, and geology. The rooms are fitted up with new furniture specially adapted for their several purposes, and contain a large quantity of valuable apparatus belonging to the different departments. In this building the classes in zoology, geology, botany, chemistry, and assaying, are taught, and the station work in chemistry and biology is carried on.

### **Engineering Buildings**

These buildings, two in number, are located south of the Main building. They comprise, besides two large recitation rooms and hall, commodious rooms for wood work, machine work, foundry, and blacksmithing, an electric light plant, and a 40-horse power steam plant. These buildings are well equipped for engineering work.

### **Women's Hall**

This is a brick building, situated on the College Farm. It contains on the first floor a large dining hall, a large parlor, a smaller reception room, the matron's room, a kitchen, etc., and upstairs there are eleven well lighted and ventilated sleeping rooms, all nicely furnished. About thirty can be accommodated in the building.



### Other Buildings

Back of the Main building are the feed rooms and horse sheds. These are for the horses of the students and professors. The charge for their use is 25 cents a term, which is sufficient to keep them clean and in order.

An adobe Farm building erected at a cost of about \$2,000 is located near the center of the farm. The Greenhouse and the sheds for the storing of farm implements and machinery are located near the Farm building. An adobe corral has recently been added to the farm equipment.

Recent appropriations have been made by the territorial legislature for a water works system, a gymnasium, a boys' dormitory and other improvements to the facilities now offered.

### GENERAL INFORMATION

The College of Agriculture and Mechanic Arts offers a great deal to the young people of New Mexico. Every effort will be made to acquaint the people of the whole Territory with its purpose and work. Its courses of study are now equal to those of similar colleges in most of the older states. Students can now get a very thorough training here in any of the leading lines of practical education. New schools generally make greater efforts than the older ones, and the energy put forth and the instruction given are often superior. There are a great number of students sent from various parts of the Territory each year to eastern colleges. We ask parents who do this, to investigate this college; and we believe if they will do so, it will get a share of their patronage, and that our people will manifest, in an increasing degree, their appreciation of the bounty of the United States and of the Territory here dispensed. We know that this College is better fitted to do good work than some of the eastern schools patronized by our people.

Mesilla Park, N. M., is the postoffice and also the general freight and express office of the college.

There is now a good elementary public school at Mesilla Park, the course of study in which connects with that of the preparatory department of the college; so that parents who desire to live in the neighborhood of the college for the sake of giving their older children its educational advantages, will also have at hand a good school for their younger children.

Strangers will find it more convenient to stop at Las Cruces, and go temporarily to some hotel. They should then report to the president, who will assist them in finding a boarding place.

*Students should be on hand the first day of the term. The necessity of this is too seldom realized. New students and those desiring re-examination should report on the day named for this work.*

#### **Fellowship**

The board of regents determined in 1900 to establish one or more fellowships, of the annual value of \$300.00, open to graduates of the college and, in default of competent graduates who have specialized in the particular line of work required of the fellow, to graduates of other colleges. These fellowships will be tenable for one or two years, but not for a longer period, and will be awarded to promising graduates who desire to pursue their studies in one or more lines beyond the undergraduate curriculum, and who are willing and able to devote half of their time to assisting in the work of one of the departments of the college. The appointment will be made upon the joint recommendation of the head of the department in which the fellow is to serve and of the president of the college. A fellow will not be permitted to carry more than two full courses of study, without the express permission of the head of his department and the president of the college.

A single fellowship in Soil Physics was established for 1901-'02 and was awarded to Alfred Sanchez.

#### **The President's Prizes**

By permission of the board of regents President Sanders offered a medal and a sholarship, consisting of all the stu-

dent's fees, to the students having the highest standing in the Freshman, Sophomore, and Junior classes for 1900-'01. To the best student in the Senior Preparatory class a similar scholarship was offered.

The winners of these prizes were as follows.

Senior Preparatory.....Reginald H. Hart.

Sophomore.....Robert J. Metcalfe.

Junior.....Elizabeth Coleman.

There being no regular Freshman, a prize in that class was not given.

Miss Ruth Coleman received honorable mention for good scholarship, but being ineligible as a Senior Preparatory or Freshman student received no prize.

For 1901-02 President Sanders offers a medal for the Freshman student having the highest standing.

#### Text Books

Text-books are furnished by the college. They will either be sold to the student at cost, or lent. Students are required to deposit \$2.50 in advance, to secure the proper care of college property and the prompt return of books borrowed. At the close of the year, or when the student withdraws, this deposit is returned unless damage has been done to the books or other college property. When this is the case the damage is assessed against the student, and any balance remaining from his deposit is returned.

This deposit may be increased with students who are notoriously careless. Students who are able should purchase their books. Many of them will be needed after leaving school, and they can be made to form the nucleus of a private library, which every student should be encouraged to collect.

#### Stationery

As the college is nearly three miles distant from any store dealing in stationery, it has been found necessary for the accommodation of students to carry at the college a small line of articles, such as paper, pencils, pens, etc., which are sold to students, for cash only, at a small profit.

### Boarding

Although the college, as such, can do nothing towards furnishing board and rooms for men, the accommodations for all classes of students are becoming quite varied and ample; the college has attracted to its immediate vicinity private families, many of whom accommodate some students with board. The price for board, room, lights, etc., in families, varies from \$16 to \$25 per month; table board in families about \$15 per month. Not far from the College campus are cottages for rent. These are usually occupied by families who have moved in and taken up temporary residence for the purpose of educating their children. This is a very satisfactory solution of the boarding problem.

A boarding club for young men—a private enterprise, conducted by Mr. Charles L. Post, address, Mesilla Park,—has been established. It is under the supervision of the Faculty. The building is sufficient to room and board about thirty students. Table board is also furnished to some who do not room in the building. So far as expenses are concerned, it is conducted on the co-operative plan. Rooms are furnished with study-tables; but students are expected to furnish their own bedsteads or cots, bedding, towels, etc. Rooms, however, will be fully furnished for those who desire it. The food is abundant, healthful and well-served. The cost to each boarder during the past year has averaged about \$12.75 per month. During the coming year, Mr. Post, who is a graduate of this college, will spend two hours each evening instructing those who wish to make up back work.

### • The Women's Hall

The Women's Hall, situated on the College farm, will accommodate about thirty students. The price of board per calendar month, with room, light, heat, and the washing of a dozen pieces including house linen, is \$17.00 when two young ladies occupy a room, and \$16.00 when there are three in a room, payable in advance on the first of each month. The rooms are comfortably furnished, but each student must pro-

vide comforts, blankets, sheets, pillow slips, towels, napkins, napkin ring, and two laundry bags. The student's name must be plainly maked on all the pieces.

The students are under the general supervision of the faculty, and in charge of the matron. For further particulars apply to the matron.

#### Estimate of Necessary Expenses

Various college incidentals .....	\$10 00...	\$10 00
Nine months' board and loding @ \$12 to \$18..	108 00 to	162 00
Laundry, per month @ \$1 00.....	9 00...	9 00
	<hr/>	<hr/>
	127 00 to	181 00

#### Paid Labor

There is a considerable amount of labor on the farm, in the shops, and in the laboratories, that can be performed by students; and the policy will be to give it to students rather than to others. Some students have been able to earn enough during the past year to pay their expenses; but those doing so have had constant employment in some subordinate position. The College cannot undertake to furnish work for all students who wish it, or need it, in anything like sufficient amount to pay expenses; and even if it could, the student's time is needed chiefly for study, recitation, and practice. Still, many worthy and industrious students pay a considerable part of their expenses by labor. Preference is given to those who are most trustworthy and meritorious, and who are regular and punctual in attendance, and correct in deportment. This labor is paid for at the rate of from  $7\frac{1}{2}$  to 20 cents per hour; but the faculty reserves the right to limit the amount of work any student may do.

#### Religion

All students will be trained in the principles of morality, but no sectarian teaching will be tolerated in the college. Entire freedom of choice is given the students in selecting the church they will attend. Services are held at the following churches every Sunday: Roman Catholic, Presbyterian,



Methodist, and occasional services are conducted by the Baptists and Episcopalians. At the Presbyterian church are held meetings of the Young People's Society of Christian Endeavor. With the Methodist church is connected the Epworth League.

### **Discipline and Government**

It should be impressed upon the youth of New Mexico that by the creation of the College of Agriculture and Mechanic Arts there has been provided for them the fullest and best opportunities to secure a practical education. Students who enjoy the advantages here offered, should realize that to forfeit these privileges on account of their misuse or abuse is a matter of the most serious concern to them. No elaborate code for the conduct of students is prescribed. The college rules are mainly for the purpose of facilitating the college business. As regards behavior, students are expected to conduct themselves as ladies and gentlemen. If, after a fair trial, the influence of any student is found to be detrimental to scholarship, morals, or good order, dismissal will follow.

During the past two years, the students have been encouraged to take an active part in the administration of the college. The student body is organized, and there is a Student Conference Committee consisting of representatives from the Student Congress and from the Faculty. This committee discusses informally all matters of student concern, whether proposed for discussion by the faculty or by the students, and recommends to the faculty and to the Student Congress such lines of action as seem to it to be wise. In matters of discipline the action proposed by the Student Congress is generally taken by the Faculty.

### **College Rules**

As already stated, it is the policy of the faculty of this institution to deal with students in the most liberal manner possible. It is assumed that college students, in an institution of this character are of sufficient age and advancement



to know how to conduct themselves properly as ladies and gentlemen. In view of this policy this institution has no written rules relating to the conduct of students. Any violation of the usually accepted code of proper conduct is dealt with as the particular case may demand.

In order that students may know how to attend to the business requirements of the institution, in regard to their studies, the library, college organizations, etc., quite a full list of rules of procedure are given below. These rules, while designed primarily for College students, apply, in many instances, to students of the Preparatory Department as well. In all special cases, the Preparatory Department has its own rules.

## A

### Matriculation, etc.

1. A student when first entering college, or at the first term of any subsequent year, must present himself

*To the President,*

who fills out the student's "admission card" and sends student with a "term assignment card"

*To the Course of Study Committee,*

which assigns studies, completes the "term card," and and issues class cards to student, who goes

*To the Registrar,*

shows him the class cards, pays fees called for by his courses, takes receipt, and then reports

*To the Instructors,*

giving the Instructor the class card and showing him his receipt. If the receipts are satisfactory, the Instructor gives the student an order for text-books, etc., and then assigns the lesson. The student then goes

*To the Librarian,*

and, showing her the book order, filled and signed by the several Instructors, gets books, and surrenders order to the Librarian.

2. At the beginning of the second and third terms, a col-

lege student who has previously entered will procure a term assignment card from the *Registrar*, who will fill out the personal part of the card before giving it to the student; and the student will then go to the *Course of Study Committee*, and the procedure will from this point be the same as at the beginning of the year, except that the student need not go to the Registrar again unless he is assigned to a course which requires the payment of a special fee or deposit.

3. *Students* must preserve the receipts they receive at the beginning of the year, and show them to their instructors at the beginning of each term as a condition of admission to class. If the receipt is lost, a duplicate may be obtained from the Registrar upon payment of a fee of 10 cents.

4. *An Instructor* must not admit a student to his class, even though he have a class card, unless he shows the Registrar's receipt or receipts for all fees and deposits required of members of the College taking the course in question.

## B

### Grading, Examination, and Classification of Students

1. The system of grading is on a scale of 100.

2. At the end of each term, unless special action be taken by the faculty to the contrary, examinations are held in all subjects, or parts of subjects, taught during that term.

3. In making up the term grade in any subject, in case an examination has been held, the average daily grade is added to the examination grade and the sum divided by two. In case no examination is held at the end of a term, the average daily grade is taken as the final mark for term.

4. The method of determining the average daily grade, except in the matter of absences, is left to the instructor in charge of the class.

5. In determining the average daily grade, an amount is deducted for unexcused absences proportional to the amount of work missed; unless the absence occurs in the first or last week of the term, or in the week preceding or succeeding a vacation, in which case it counts double. Excused absences

count the same as those unexcused, unless the work missed is made up to the satisfaction of the instructor in charge.

6. Any student receiving an average daily grade of 85, or over, in any subject, may, at the discretion of the instructor in charge, have this mark taken as the final grade for the term, in that subject, without having to take an examination.

7. If a student receive a final term grade of 70 or over, in any subject, he shall be passed; otherwise he shall be conditioned.

8. (a). A student conditioned in any subject has a chance to remove his condition by taking a re-examination in the subject. If he fail in the re-examination, or fail to take the same at the specified time, credit for the work will only be given after he has repeated the subject in class and made a passing grade on the same.

(b). All re-examinations for failures in entrance examinations, or in studies during any year except the Senior, take place in the first week of the first term of the next year.

(c). All re-examinations for failures during the first two terms of the Senior year must occur before the beginning of the third term of that year.

9. Whenever a student, by action of the faculty, is put into a lower class, he may be required to repeat all the studies of that class, whether he has previously passed in them or not.

10. If a student, at the end of any term, fail in every subject, or in every subject save one, he may be at once dropped to a lower class, or from college, as the faculty may decide.

11. No student taking a regular course is allowed to take up any subject in that course until he has passed in all preceding work necessary to fit him for that subject. Neither will such a student be excused from any prescribed work in that course except by special action of the faculty.

12. No special student is allowed to enter any class unless, in the opinion of the instructor in charge, he is thoroughly prepared in all necessary preceding branches.

13. In case of any conflict in the course of study, the higher subject shall give way to the lower.

14. Regular college students are classified as Freshman, Sophomore, Juniors, or Seniors, according to the number of hours work they have completed. Thus if the number of hours required per week is 20, the number of weeks per year 36, and the number of years 4, then the minimum number of hours required for graduation would be  $20 \times 36 \times 4 = 2880$ . In this case, a student would be classified as a Freshman until he had completed 720 hours, and thereafter as a Sophomore until he had completed 1440 hours, etc.

In the above scheme, two hours of drawing, laboratory work, shop practice, or field work, are counted as equivalent to one hour recitation.

15. (a) No grade from another school will be accepted as an equivalent of work in this institution unless said school ranks as high as this one, and then only by special action of the faculty.

(b) In all other cases, where a student desires credit for work done elsewhere, the same will only be given after the student passes a satisfactory examination in this institution.

16. A record is kept of the work of each student, and at the end of each term, reports showing the grades, etc., of the different students, are sent to their parents or guardians.

## C

### Graduation

1. Seniors having conditions at the beginning of the third term of the Senior year will not be considered candidates for a degree.

2. A student, in order to graduate, must have completed the full amount of work included in one of the college courses of study, or an equivalent of the same which has been accepted by the faculty.

3. Each candidate for graduation is required to prepare a thesis, which shall be passed upon by a committee consisting of the head of the department in which the work was done, the professor of English, and the president.

4. Any graduate may be required by the faculty to give an exercise on commencement day, consisting of an oration or an extract from or abstract of his thesis.

5. Subjects for theses must be presented to the faculty for approval not later than the end of the second term of the Senior year.

6. All theses must be handed in for inspection by the committee referred to under section 3, before the beginning of the Senior vacation, and the finished thesis must be filed with the Registrar not later than the beginning of the second week of the Senior vacation.

7. A thesis, in order to be finally accepted, must be clearly written, or type-written, on good linen paper, size 8x10½ inches, bound, and a copy delivered to the Registrar for permanent preservation.

8. Seniors are given a vacation during commencement week and the week immediately preceding.

## D

### Absence and Tardiness

1. A male student who is absent or tardy must state the reason for such absence or tardiness, to the different instructors concerned, the first time he meets said instructors in class thereafter. If no such statement is rendered, the student will be marked zero for the work missed.

2. A female student must, in a similar manner, present to the different instructors concerned, not later than the second time she meets said instructors in class thereafter, a written statement from the dean of women as to whether an absence or tardiness has been satisfactorily explained.

3. Any student who is absent from a regular examination at which he should be present, shall be required to present to the instructor in charge a satisfactory excuse for the same, in default of which said student shall at once be suspended from college.



## E

## The Library

1. Subject to the following rules, books and periodicals may be drawn from the library by making the necessary application to the librarian.

2. (a) Temporary assignment of library books may be made to the different departments of the institution, by the librarian, subject to the approval of the president. Books so assigned may be recalled at any time.

(b) Indefinite assignment of library books and periodicals may be made to the different departments by the library committee, subject to the approval of the faculty. Books and periodicals so assigned can only be recalled by faculty action.

3. No library book, unless in a department library, may be kept out for more than two weeks consecutively. For each day overtime a fine of three cents is imposed.

4. Encyclopædias and similar works of reference must not be taken out of the library, except by special permission of the librarian.

5. (a) Current numbers of periodicals may not be kept out of the library longer than over night, except during the period from Friday evening to Monday morning. (b) The last seven issues of the dailies, the last four issues of the weeklies and the last two issues of the monthlies are considered current numbers.

6. Current numbers of periodicals may not be drawn sooner than one hour before the library is closed and must be returned by 9:00 A. M. of the day on which rule 5 calls for their return.

7. Periodicals, other than current numbers, will be governed by the same rules as library books.

8. No book or periodical assigned to any department may be drawn without the expressed consent of the head of that department.

9. Fines will be imposed by the librarian for loss of, or unreasonable damage to, library books or periodicals.



**F****College Organizations**

1. The public exercises of all societies, classes, athletic teams, or other organizations connected with the college, are subject in time, place and character, to the approval of the faculty. All rooms assigned for the use of societies, or other organizations, shall be occupied subject to the faculty's control.

2. All societies, classes, athletic teams, or other organizations connected with the college, are required to notify the faculty in writing of all dates desired for public exercises. When possible, such notices shall be given at least two weeks before such exercises are to be given.

3. The faculty reserves the right of passing upon the constitutions and by-laws, and all subsequent amendments to the same, of all societies organized in connection with the college.

**G****Miscellaneous**

1. (a) Stalls are provided for the horses of officers and students who ride or drive to the college. These stalls are rented at the beginning of each term, twenty-five cents per term being charged for each single, and fifty cents per term for each double stall; the amount to be paid in advance.

(b). The members of the faculty and other officers have first choice of stalls, and the Seniors, Juniors, Sophomores, Freshmen, students in the stenography course, preparatory students and special students, have choice of the remainder in the order named.

2. Carriages must be so arranged about the horse stalls that an open passage is left between the carriages and stalls, and horses must not be tied in places where they block the passage to the stalls.

3. The first Friday in May is a holiday set apart for athletic sports, and is known as Field Day.

4. No student who has failed in any subject of the preceding term shall be eligible to membership in any college team,

and the faculty may, at any time, deprive a student whose college work is unsatisfactory of the privilege of taking part in any team or public athletic work.

5. Smoking, or the carrying of lighted pipes, cigars, or cigarettes, is not permitted in or about any of the buildings of the college and experiment station.

## COLLEGE ORGANIZATIONS

### The Student Congress



This is an organization of the students designed to promote "self-government." Matters of importance concerning the conduct of students are brought to the attention of this body before final action is taken by the faculty. The power delegated to the organization is only advisory, yet its wishes are seldom disregarded. Although the Student Congress, as an organization, is still in its infancy, it is already recognized as a powerful factor in all college affairs. The members of the executive committee of the

organization are elected each term and are as follows: President, vice-president, secretary and treasurer, and two delegates from each of the following classes: Senior, Junior, Sophomore, Freshmen, Stenography, and Sub-Freshmen, or Senior Preparatory. The officers for the present term are:

Alfred Sanchez.....	President
Nora Newberry.....	Vice-President
Fannie French.....	Secretary and Treasurer

### The Columbian Literary Society

The society was organized October 25, 1891, under the name of Alpha Chi. In 1892 this was changed to Columbian, since which time the society has made steady and prosperous growth. Until about the middle of 1894-95 only men were admitted as members, but since that time women have had equal membership privileges. The object of the society is to promote and encourage conscientious and practical literary

and musical work by readings, essays, papers, debates, vocal and instrumental music, and such other exercises as the committee on program may prescribe. Applicants for admission must be college students in good standing, and must pay an entrance fee of two dollars. This fee admits them as members of the society and they receive the society periodical, referred to further on, for one year. Dues of fifty cents must be paid each succeeding term. Regular meetings are held on Friday of each month. Initiation nights are set and made a special feature by the program committee. Visitors are allowed during the literary part of all meetings.

#### Officers.

Minnie Newberry.....	President
Orrick Metcalfe.....	Vice President
Chas. L. Post....	Recording Secretary
Myrta Comfort.....	Corresponding Secretary
Mary Metcalfe....	Treasurer
Helen Macgregor.....	Librarian
W. A. Sutherland.....	Critic
Theron Bennett.....	Vice-Critic
Nora Newberry.....	Marshal
Adalaide Hughes, J. S. Macgregor, Nora Newberry, Program Committee.	

#### The Collegian

The *New Mexico Collegian* is published and managed by the Columbian Literary Society. It was founded in February, 1893, and has been published regularly since that time. Eight excellent commencement numbers have been issued. The number issued this commencement appeared as a "Cap and Gown Number" approaching in size and style the college annual. It was a very attractive and interesting number designed to show something of the student life of this institution.

The *Collegian* is a thirty to forty page journal and contains contributions from students, besides the matter usually found in college publications. It is issued monthly during the col-

lege year, and has a good circulation throughout the territory, and one which is constantly increasing.

The interest of students in the journal has grown considerably since it was founded, and it appears to be especially valued by those who leave college, serving as it does to keep them in close touch with the institution and with their college friends.

Except for the commencement number, the *Collegian* is self-supporting, and has every prospect of being a successful journal. All work in connection with its publication is entirely gratuitous. The subscription price is one dollar per year.

### Staff

The editor-in-chief and business manager are elected for the scholastic year but the associate editors are elected every term at the regular election of officers of the Columbian Society.

FOR 1900-'01.

Theron Bennett.  
J. S. Macgregor.

Editor-in-chief.

Business Manager.

FOR 1901-'02.

Robert Metcalfe.  
Carl Snow.



### Athletic Association

The Athletic Association was organized in October, 1893, and since that time its growth has more than kept pace with that of the college at large. All the athletics in the institution are under the control of this association. So far, football, baseball, basketball, and tennis have been the principal sports. Aside from these, there is an annual Field Day, when medals or other prizes are awarded to the winners of the different events. In the Field Day of this and of some preceding years the women of the college have taken part as well as the men. The association officers are: a president, a secretary, a treasurer, an auditor (elected from the Faculty), and managers of football, baseball, basketball, tennis and Field Day. These nine officers constitute an executive board, which has charge of all sports sanctioned by the association, and also of the levying of all assessments. All officers are

elected annually on the second Monday of each collegiate year. The basketball team of 1899-1900 holds the intercollegiate championship of the territory. During this year, through the efforts of the association, a grand stand, with a seating capacity of two hundred, has been erected on the athletic ground, at a cost of about \$600.

The executive board of 1900-'01 was as follows:

Robert Metcalfe.....	President
Nora Newberry.....	Secretary
Russell Stinnett.....	Treasurer
Professor Barker.....	Auditor
W. A. Sutherland.....	Manager of Football
Fred. T. Wylie.. ..	Manager of Baseball
Orrick Metcalfe.....	Manager of Tennis
Lizzie Coleman.....	Manager of Basketball
Carl Snow.....	Manager of Field Day



## ALUMINI

### Officers of the Alumni Association

	FOR 1900-1901.	FOR 1901-1902.
President.....	W. A. Sutherland.....	J. D. Tinsley
First Vice-President.....	I. H. Stanley.....	Iva R. Mead
Second ".....	Elgin C. Holt .....	Chas. L. Post
Secretary.....	Fabian Garcia.....	Fabian Garcia
Treasurer.....	J. D. Tinsley.....	Oscar C. Snow

### Class of 1894

Fabian Garcia, B. S., Assistant Professor of Horticulture and Horticulturist to the Experiment Station, New Mexico College of Agriculture and Mechanic Arts, Mesilla Park, New Mexico.

Mrs. Agnes Herbert (née Williams), B. S., Housewife, Hondo, New Mexico.

R. Roy Larkin, B. S., Principal Public Schools, Gallup, New Mexico.

Lemuel C. McGrath, B. S., Merchant, Lordsburg, New Mexico.

Oscar C. Snow, B. S., Ranchman, Mesilla Park, New Mexico.

### Class of 1895

Mrs. Jessie Rhodes (née Casad), B. S., Housewife, El Oro D. F., Mexico.

### Class of 1896

Mae Gilmore, B. S., Teacher, Lower Peñasco, New Mexico.

Alfred M. Holt, M. S., Assistant Chemist, New Mexico College of Agriculture and Mechanic Arts, Mesilla Park, New Mexico.

Albert H. Peterson, B. S., Mechanic, Denver, Colorado.

Clarence E. Rhodes, B. S., with American Mining Co., El Oro, D. F., Mexico.

**Class of 1897**

Joseph F. Bennett, Jr., M. S., Chemist, Silver City Reduction Works, Silver City, New Mexico.

Elgin B. Holt, B. S., Cattleman, Graham, New Mexico.

Arthur E. Williams, Tularosa, New Mexico.

**Class of 1898**

Edwin E. Casey, B. S., U. S. V. Deceased 1898.

Duval G. Cravens, B. S., Master of Mathematics and Spanish, St. Alban's School, Radford, Va.

Charles E. Mead, B. S., Aztec, N. M.

Iva R. Mead, B. S., Teacher, Public Schools, Las Cruces, N. M.

Isaac H. Stanley, B. S., Photographer, Pinos Altos, N. M.

William A. Sutherland, B. S., Instructor in Spanish and Latin, N. M. College of Agr. and Mech. Arts, Mesilla Park, N. M.

Lottie Sweet, B. S., Teacher, Ruidoso, N. M.

George M. Williams, B. S., Student, Leland Stanford, Jr. University, Stanford, Cali.

**Class of 1899**

Edward J. Coe, B. S., Fruit Grower, Stanton, N. M.

Walter E. Holt, B. S., Cattleman, Graham, N. M.

John D. Tinsley, B. S., Professor of Soil Physics and Soil Physicist, Vice-Director of the Exper. Sta., N. M. College of A. and M. Arts, Mesilla Park, N. M.

**Class of 1900**

William Cory Meeker, B. S., Clifton, Arizona, Student of Oberlin College 1900-'01.

Charles Lewis Post, M. S., Mesilla Park, N. M.

Archie Bruce Sage, B. S., Assistant in Mechanical Engineering, N. M. College of A. and M. Arts, Mesilla Park, N. M.

Halbert E. P. Thomas, B. S., Instructor in Physics, Chemistry, and Geology, New Mexico Normal School, Silver City, N. M.

**Class of 1901**

Leah Nora Newberry, Mesilla Park, N. M.

Minnie Wilson Newberry, Mesilla Park, N. M.

Alfredo Marcos Sanchez, Fellow in Soil Physics, N. M.

College of A. & M. Arts, Mesilla Park, N. M.

Matthew Steel, Las Cruces, N. M.

# CATALOGUE OF STUDENTS

## The College

Bennett, Theron Catlin (Soph.).....	Pierce City, Mo
Coats, Mrs. Grita L. (Sp.).....	Mesilla Park
Coleman, Elizabeth (J.).....	Mesilla Park
Danburg, Walter Malcolm (Sp.).....	Las Cruces
Ford, Fannie (Soph.).....	Las Cruces
Fredick, Ernest W. (Sp.).....	Mesilla Park
French, Fannie (J.).....	Las Cruces
Hubbard, Harry Jenkins (J.)....	Clint, Texas
Hughes, Adalaide Margaret (Soph.).	Washington, D. C
Isaacks, Mary Caledonia (F.).....	Las Cruces
Kerr, Birdie Ruth (F.).....	Cambray
Kerr, Saddle (F.).....	Cambray
Macgregor, James Stanislaus (J.).....	Mesilla Park
May, Ormeda (Sp.)..	Las Cruces
Metcalf, Mary Thomas (Sp.).....	Mangus Springs
Metcalf, Orrick Baylor (Soph.).....	Mangus Springs
Metcalf, Robert James (Soph.).....	Mangus Springs
Miller, Walter Lucas (Sp.).....	Santa Fe
Mordy, Isabella (Sp.).....	Clifton, Arizona
Mott, Rowena (Soph.)....	Las Cruces
Newberry, Leah Nora (S.).....	Mesilla Park
Newberry, Minnie Wilson (S.).....	Mesilla Park
Newbrough, Justine (Sp.).....	Shalam, Doña Ana
O'Keefe, Mary Ellen (Sp.).....	El Paso, Texas
Page, Albert Smith (Sp.).....	Las Cruces
Post, Charles Lewis (Gr.)	Mesilla Park
Sanchez, Alfredo Marcos (S.).....	Mesilla
Snow, Carl (F.).....	Victoria
Steel, Matthew (S.).....	Las Cruces
Stinnett, Russell Tamah (Soph.).....	Bells, Va
Vernon, Harriet (Sp.).....	Mesilla Park
Wylie, Frederic Tuttle, (Sp.).....	Las Cruces

NOTE.—Gr.—Graduate Student; S.—Senior; J.—Junior; Soph.—Sophomore; F.—Fresh men; Sp.—Special Student.

See College Rules, B. 14, p. 73.

## STENOGRAPHY DEPARTMENT

Carrera, Regina.....	Las Cruces
Comfort, Myrta.....	El Paso, Texas
Fernandez, Gracia Lilian.....	Dexter, Me
Gallegos, Mary Matilda.....	Lincoln
Gildersleeve, Mabel.....	Santa Fe
Howard, George Volney.....	Santa Fe
Johnson, Jean.....	Mesilla Park
MacKenzie, Donald Gordon.....	Newburg, Ore
Newton, Cornelius Rector.....	Earlham
Palacios, Arcadio, Jr.....	Chihuahua, Mexico
Scoggins, Ona.....	Mesilla Park
Smith, Mrs. Hannah K.....	Preque Isle, Me
Sutherland, Frances Florence.....	El Paso, Texas

## PREPARATORY DEPARTMENT

Angel, Ygnacio (Sp.).....	Las Cruces
Ascarate, Frank M. (C.).....	Las Cruces
Ascarate, Nemecia (J.).....	Las Cruces
Bailey, Iva (A.).....	Chamberino
Bloodgood, Dean W. A. (J.).....	Kingston
Brown, Maughs John (S.).....	Mesilla Park
Brunner, George (S.).....	El Paso, Tex.
Bull, Charles Henry (B.).....	Mesilla
Caldwell, George R. (B.).....	Mesilla
Carr, Otho (J.).....	El Paso, Tex.
Carrera, Emile (C.).....	Las Cruces
Carrera, Theolinda (A.).....	Las Cruces
Chavez, Epifanio (Sp.).....	Las Cruces
Chavez, Frederico (Sp.).....	Belen
Chavez, Jacobo (Sp.).....	San Antonio
Chavez, Manuel Ramon (Sp.).....	Mesilla
Coleman, Daniel (C.).....	Mesilla Park
Coleman, Ruth (S.).....	Mesilla Park
Cowell, Mary A. (A.).....	Kelly

NOTE—Gr.—Graduate Student; S.—Senior; J.—Junior; Soph.—Sophomore; F.—Freshmen; Sp.—Special Student.  
See College Rules, B. 14, p. 73.

Crooks, William Festus (A.).....	Trenton, Mo.
Cuaron, Fernando (Sp.).....	Las Cruces
Deemer, Phyllis B. (J.).....	Sierra Mojada, Mex.
Deemer, Ralph B. (J.).....	Sierra Mojada, Mex.
Delgado, Arnuefo (B.).....	Chihuahua, Mex.
Delgado, Ignacio (Sp.).....	Chihuahua, Mex.
Dessauer, Philip Edward (A.).....	Las Cruces
Diaz, Angel.....	Chihuahua, Mex.
Disinger, George Henry (J.).....	Hillsboro
Elliott, Richard Henry (C.).....	Lordsburgh
Esperon, Camilo (C.).....	Chihuahua, Mex.
Evans, Flora Lucille (B.).....	El Paso, Tex.
Fall, Alexina (B.).....	Las Cruces
Fall, Jack Morgan (B.).....	Las Cruces
Finney, Ray Arlington (J.).....	San Marcial
Ford, Alice Bessie (B.).....	Las Cruces
Ford, Annis Bell (S.).....	Las Cruces
Ford, Lela Ray (B.).....	Las Cruces
Foster, Fossie (S.).....	Las Cruces
Fountain, Albert J. (Sp.).....	Mesilla
Freeman, John J. (A.).....	Anthony
Gaddes, Thomas E. (A.).....	Gold Hill
Garrett, Dudley Poe (J.).....	Las Cruces
Garza, Felicitas (C.).....	Las Cruces
Garza, Francisco (Sp.).....	Las Cruces
Goebel, Edgar A. (C.).....	Belen
Goebel, Walter Emile (B.).....	Belen
Gonzales, Alejandro (B.).....	Mapimi, Mexico
Gonzales, Jesus [B.].....	Mesilla Park
Goodin, Frank M. (J.).....	White Oaks
Graham, Allen Givens (A.).....	Magdalena
Graham, Earl Addison (J.).....	Magdalena
Grijalba, Marcos (Sp.).....	Hillsboro
Guerra, Juan (Sp.).....	Mesilla
Hammond, Laura V. (A.).....	Mesilla Park

NOTE.—Gr.—Graduate Student; S.—Senior; J.—Junior; Soph.—Sophomore; F.—Freshmen; Sp.—Special Student.  
See College Rules, B. 14. p. 73



Harper, Dora (B.)	Clifton, Arizona
Hart, Reginald Henry (S.)	El Paso, Texas
Hatton, Thurman T. (B.)	Las Cruces
Herrera, Louis (Sp.)	Las Cruces
Hitchcock, James E. (B.)	San Marcial
Hockett, Sidney J. (C.)	San Marcial
Hostetter, Cecil (A.)	Las Cruces
Hostetter, Hazel (A.)	Las Cruces
Howe, Vannie D. (A.)	El Paso, Texas
Isaacks, Coila N. (A.)	Las Cruces
Isaacks, William F. (J.)	Las Cruces
Jackson, William C. (Sp.)	Las Cruces
Kappler, Charles (Sp.)	Mesilla Park
Kingsley, Richard H. (B.)	Las Cruces
LaPoint, William P. (J.)	Las Cruces
Llewellyn, Gladys (J.)	Las Cruces
Llewellyn, Frances (B.)	Las Cruces
Lockwood, Kent (B.)	Hillsboro
Lowe, Joseph Walden (B.)	Las Cruces
Losoya, Hilario (J.)	Guanacevi, Durango, Mexico
Lucero, Francisco (C.)	Las Cruces
Lucero, Guadalupe (Sp.)	Las Cruces
Lucero, Miguel (Sp.)	Mesilla
Luna, Carlota (Sp.)	Las Cruces
Mackedon, Edward J. (B.)	San Pedro
Mackedon, John J. (J.)	San Pedro
McLean, John W. (B.)	Clifton, Arizona
Mead, Anita L. (A.)	Mesilla Park
Mead, Herbert Henry (Sr.)	Mesilla Park
Mejia, Abelino (J.)	Solomonville, Arizona
Mejia, Albino (J.)	Solomonville, Arizona
Miller, Bernard (B.)	Cliff
Miller, Walter Lucas (S.)	Santa Fe
Mills, Lloyd F. (B.)	Las Cruces
Mordy, Jessie Laura (B.)	Clifton, Arizona

NOTE.—Gr.—Graduate Student; S.—Senior; J.—Junior; Soph.—Sophomore; F.—Freshmen; Sp.—Special Student.  
See College Rules, B. 14, p. 73.

Mossman, Nellie Gertrude (C.)	Mesilla Park
Nattress, Charles H. (B.)	San Marcial
Neal, Homer H. (J.)	Mesilla Park
Nevares, Jesus F. (J.)	Las Cruces
Newberry, Henry Clay (S.)	Mesilla Park
Newcomb, Alice (B.)	Las Cruces
Newcomb, Elizabeth Simone (Sr.)	Las Cruces
Newman, Mary E. (J.)	El Paso, Texas
Olinger, Robert (J.)	Mesilla Park
Oppenorth, Henry (B.)	Hillsboro
O'Rear, Archie (A.)	Magdalena
O'Rear L. Russell (A.)	Magdalena
Pearson, Trust (A.)	El Paso, Texas
Piñones, Gabriel (Sp.)	Mesilla
Poe, James (B.)	Mesilla Park
Poe, Oscar Leroy (Sp.)	Mesilla Park
Potter, Ada (B.)	Mesilla
Potts, Burt (A.)	Las Cruces
Quintero, Fernando (B.)	Mesilla
Quintero, Jose (Sp.)	Mesilla
Ramirez, Juan (B.)	Las Cruces
Ramirez, Rafael (Sp.)	Mesilla Park
Reza Adolfo (Sp.)	Las Cruces
Rhodes, John (Sp.)	Las Cruces
Roberts, Guy M. (J.)	Trenton, Mo.
Roualt, Ernest J. (J.)	Las Cruces
Russell, Ora (J.)	Magdalena
Sampson, Irving W. (C.)	Las Cruces
Sancedo, Jose Maria (Sp.)	Las Cruces
Schenk, August (J.)	Las Cruces
Schenk, George Leo (Sp.)	Las Cruces
Schenk, James J. (Sp.)	Las Cruces
Scoggins, Beulah (A.)	Las Cruces
Sells, George B. (B.)	Las Cruces
Shaw, Mary Elizabeth (S.)	San Marcial

NOTE—Gr.—Graduate Student; S.—Senior; J.—Junior; Soph.—Sophomore; F.—Freshmen; Sp.—Special Student.  
See College Rules, B. 14, p. 73.

Soto, Carlos (A.)	Las Cruces
Steele, James Alexander (B.)	Las Cruces
Stoneking, J. Benton (A.)	Kelly
Sutherland, Ethel (J.)	Gallup
Sweet, Jacob A. (B.)	Mesilla Park
Torres, Donaciano (Sp.)	Las Cruces
Uranga, Armando (Sp.)	Las Cruces
Villareal, Ramon (Sp.)	Metcalf-Clifton, Ariz.
Wade, Edward C. (B.)	Las Cruces
Walker, Alva M. (J.)	Denton, Tex.
Walker, Clio Wythe (S.)	Magdalena
Williams, Donedwa (C.)	Lincoln, Neb.
Yates, Thomas Keelin (S.)	Georgetown
Yoast, Irvin (A.)	Las Cruces
Yoast, Mamie E. (B.)	Las Cruces
Young, Donald (C.)	Las Cruces

---

NOTE—Gr.—Graduate Student; S.—Senior; J.—Junior; Soph.—Sophomore; F.—Freshmen; Sp.—Special Student.  
See College Rules, B. 14, p. 73.

## AGRICULTURAL EXPERIMENT STATION

### Board of Control

(BOARD OF REGENTS OF THE COLLEGE)

L. BRADFORD PRINCE, LL.D., President, Santa Fé, N. M.  
 P. H. CURRAN, Secretary and Treasurer, Las Cruces, N. M.  
 GRANVILLE A. RICHARDSON, Roswell, N. M.  
 A. A. JONES, East Las Vegas, N. M.  
 H. B. HOLT, Las Cruces, N. M.

### Advisory Members

HON. MIGUEL A. OTERO, Governor, Santa Fé, N. M.  
 HON. J. FRANCISCO CHAVES, Superintendent of Public  
 Instruction, Santa Fé, N. M.

### Station Staff

FRANCIS E. LESTER, Executive Officer in Charge.  
 ARTHUR GOSS, M. S., A. C., Chemist.  
 E. O. WOOTON, A. M., Botanist.  
 J. D. TINSLEY, B. S., Vice-Director, Soil Physicist and  
 Meteorologist.  
 JOHN J. VERNON, B. S. AGR., Agriculturist.  
 FABIAN GARCIA, B. S., Horticulturist.

---

R. F. HARE, M. S., Assistant Chemist.  
 HELEN M. MACGREGOR, Stenographer.

### AGRICULTURAL EXPERIMENT STATION

By the Congressional Act of 1887, the "Hatch Act" (see page 10,) a department of agricultural colleges was endowed, having for its purpose the performing of experiments of value to agriculture and horticulture and the diffusing of valuable information among the people. The Territorial Act of February 28, 1889, which established the New Mexico College of Agriculture and Mechanic Arts, established also an Experiment Station in connection with the college. This department is in successful operation.

The college farm, which was donated to the territory by the citizens of Doña Ana county, contains about 250 acres. Nearly 100 acres of this farm is good river bottom land, supplied with water from the Las Cruces community ditch which crosses it. The leading experiments at present being conducted on the college farm have for their object the determination of irrigation problems; the actual amount of water used under ordinary methods of farming, the amount of water necessary to the production of crops, how far cultivation may be made to serve in the saving of moisture in the soil, etc. Tests of grasses and forage crops and experiments in orchard management are also being made.

In addition to the work of the agricultural section, the departments of chemistry, botany and entomology are employed in solving problems of practical interest to the New Mexico farmer and fruit grower.

The following bulletins have been issued from the Experiment Station, and, with the exception of those marked with an asterisk, will be sent free of charge to all persons in New Mexico who apply for them:

\* No. 1, April, 1890—General Information.

\* No. 2, October, 1890—Outline of Plans of Experimentation.

No. 3, June, 1891—Preliminary Account of Some Insects Injurious to Fruit.—C. H. Tyler Townsend.

No. 4, March, 1892—Fruit Trees, Forest and Shade Trees, Nut-bearing Trees, and Vegetables—A. E. Blount.

No. 5, March, 1892—Notices of Importance Concerning Fruit Insects—C. H. Tyler Townsend.

No. 6, March, 1892—Cereals, Forage Plants, Grasses, Clovers, Textile Plants, and Sorghums—A. E. Blount.

No. 7, June, 1892—Scale Insects in New Mexico—C. H. Tyler Townsend.

\*No. 8, November, 1892—Wheat, Oats, Barley, Rye, Sugar Beets, Sorghum, Cañaigre, etc.—A. E. Blount.

No. 9, May, 1893—Insecticides and their Appliances—C. H. Tyler Townsend.

No. 10, September, 1893—Insects of 1893—T. D. A. Cockerell.

\*No. 11, October, 1893—Notes on Cañaigre and Meteorological Data—A. E. Blount and Harvey H. Griffin.

No. 12, November, 1893—The Value of Rio Grande Water for the Purpose of Irrigation—Arthur Goss.

No. 13, New Mexico Weeds, No. 1—E. O. Wooton.

No. 14, Cañaigre—A. E. Blount

No. 15, Entomological Observations in 1894; Life Zones in New Mexico; Entomological Diary at Santa Fé—T. D. A. Cockerell.

No. 16, September, 1895—The Russian Thistle—E. O. Wooton.

No. 17, December, 1895—Principles of Stock Feeding and Some New Mexico Feeding Stuffs—Arthur Goss.

No. 18, March, 1896—Some New Mexico Forage Plants—E. O. Wooton.

No. 19, April, 1896—Report of the Entomologist (Part I.)—T. D. A. Cockerell.

No. 20, December, 1896—Seeds—George Vestal.

No. 21, January, 1897—Results of Experiments at San Juan Sub-Station—H. H. Griffin.

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\* The edition of these Bulletins is exhausted.



No. 22, March, 1897—Alkali in the Rio Grande and Animas Valleys—Arthur Goss and H. H. Griffin.

No. 23, April, 1897—Sugar Beets—Cornelius T. Jordan.

\* No. 24, August, 1897—Life Zones in New Mexico—T. D. A. Cockerell.

No. 25, February, 1898—Preliminary Notes on the Codling Moth—T. D. A. Cockerell.

No. 26, June, 1898—New Mexico Sugar Beets—Arthur Goss.

No. 27, June, 1898—Report on Plums—George Vestal and Fabian Garcia.

No. 28, December, 1898—Life Zones in New Mexico, No. 2—T. D. A. Cockerell.

No. 29, May 1899—New Mexico Sugar Beets—Arthur Goss and A. M. Holt.

No. 30, May, 1899—The Effect of Spring Frosts on the Peach Crop; With Cultural Notes on the Peach in New Mexico—Fabian Garcia.

No. 31, December, 1899,—A Study of Soil Moisture—Charles A. Keffer and John D. Tinsley.

No. 32, December, 1899—Grasses and Forage Crops—Charles A. Keffer.

No. 33, April, 1900—Notes from the San Juan Sub-Station—Charles E. Mead.

No. 34, June, 1900—Principles of Water Analysis as Applied to New Mexico Waters—Arthur Goss.

No. 35, October, 1900—Observations on Insects—T. D. A. Cockerell.

No. 36, October, 1900—Announcement to New Mexico Ranchmen and List of Bulletins.

No. 37, March, 1901—Notes on the Food of Birds—T. D. A. Cockerell.

No. 38, May, 1901—Soil and Soil Moisture Investigations for 1900—J. D. Tinsley and J. D. Vernon.

No. 39, June 1901—Orchard Notes—Fabian Garcia.

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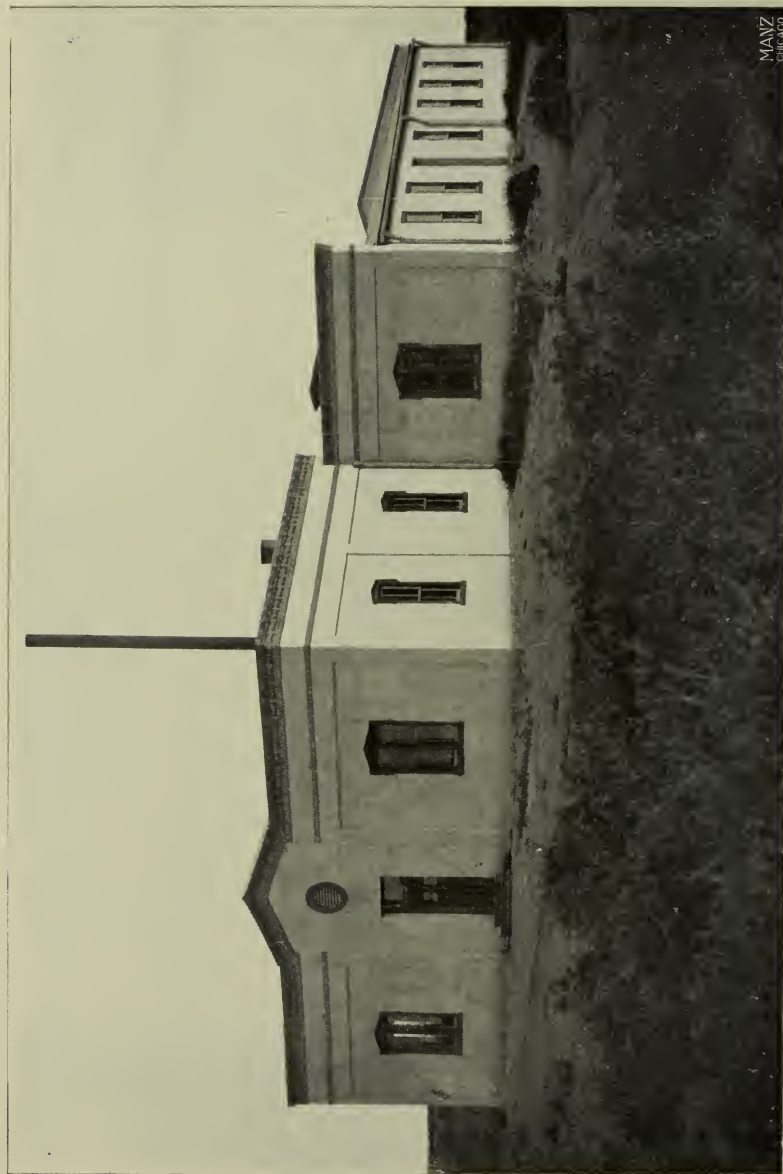
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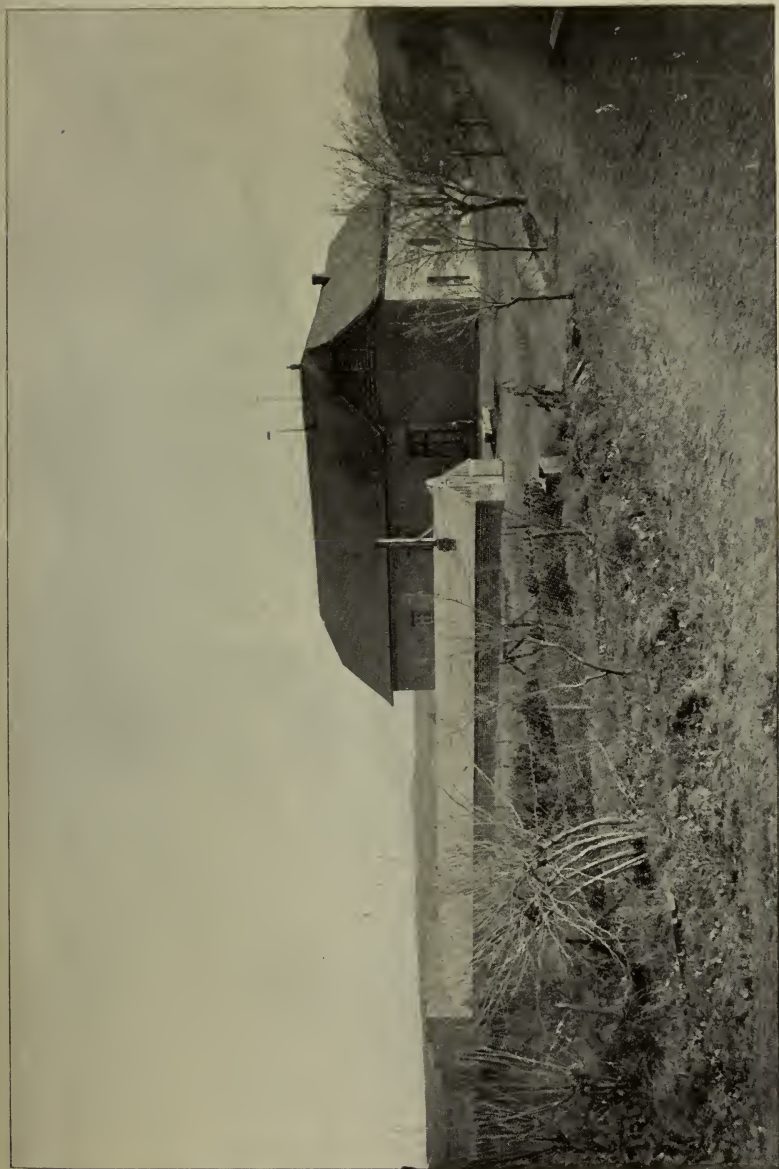


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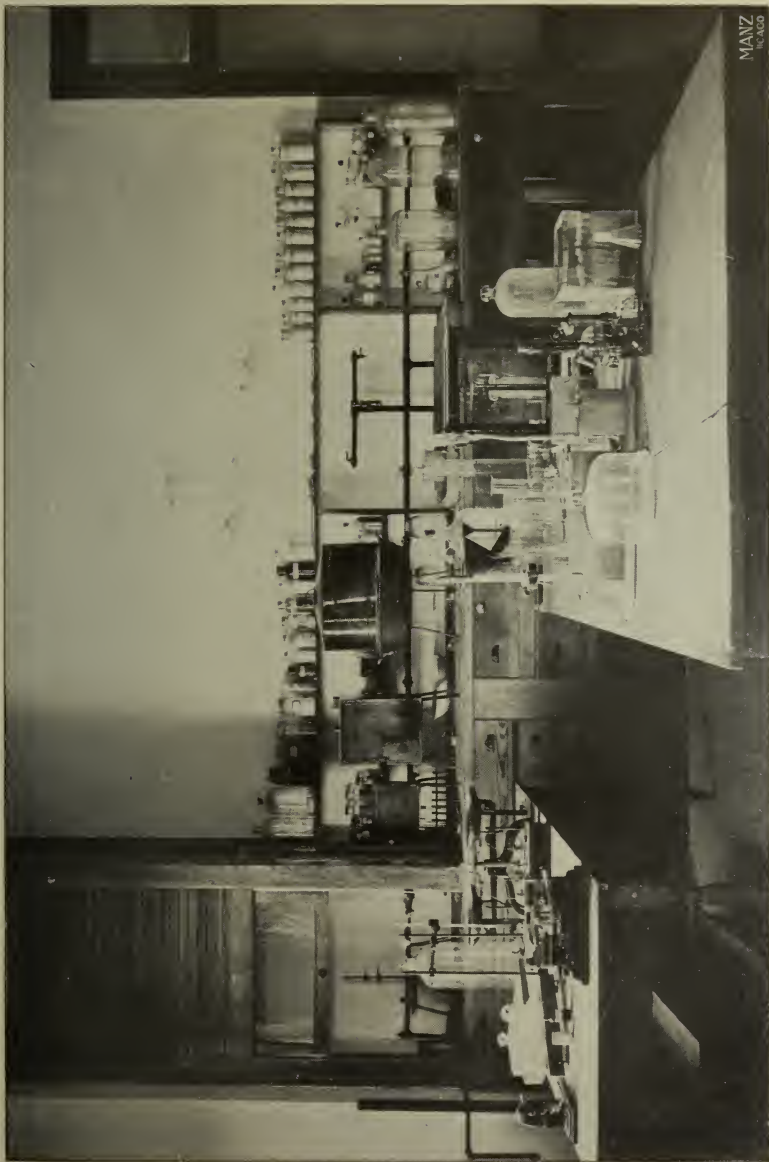


GREENHOUSE AND FARM BUILDINGS





SCIENCE HALL



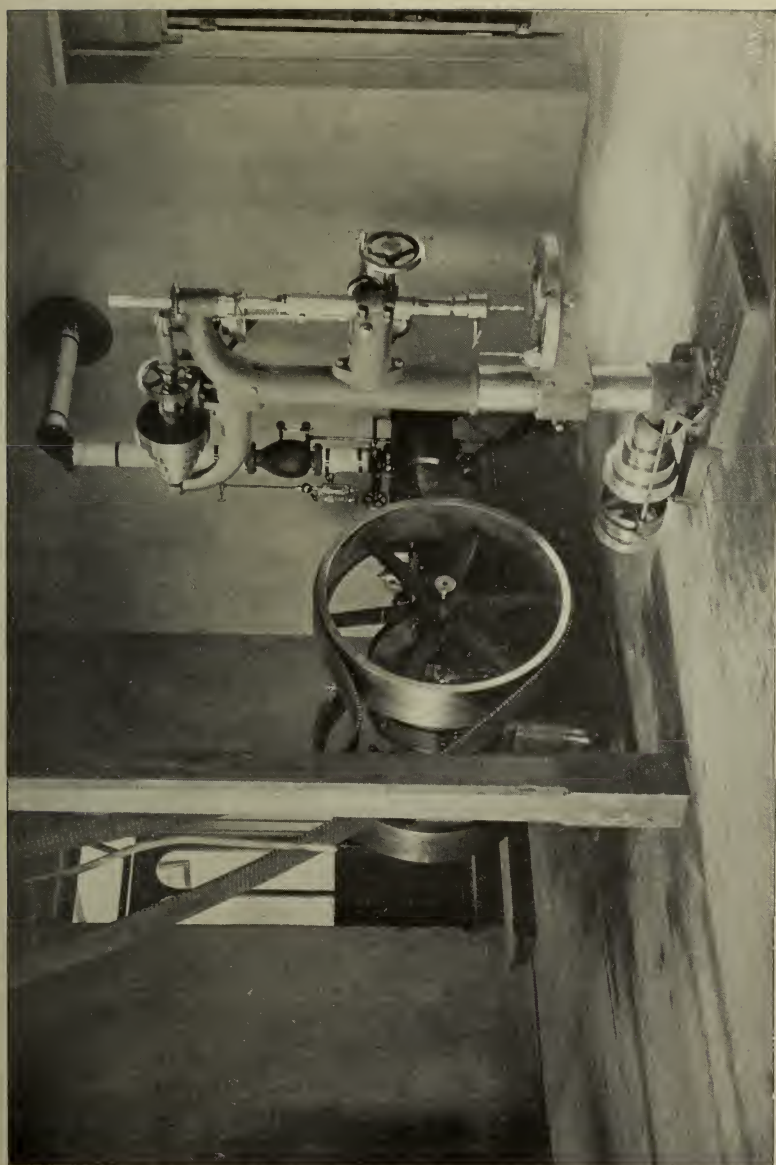
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REG. AGO

LABORATORY OF SOIL PHYSICS



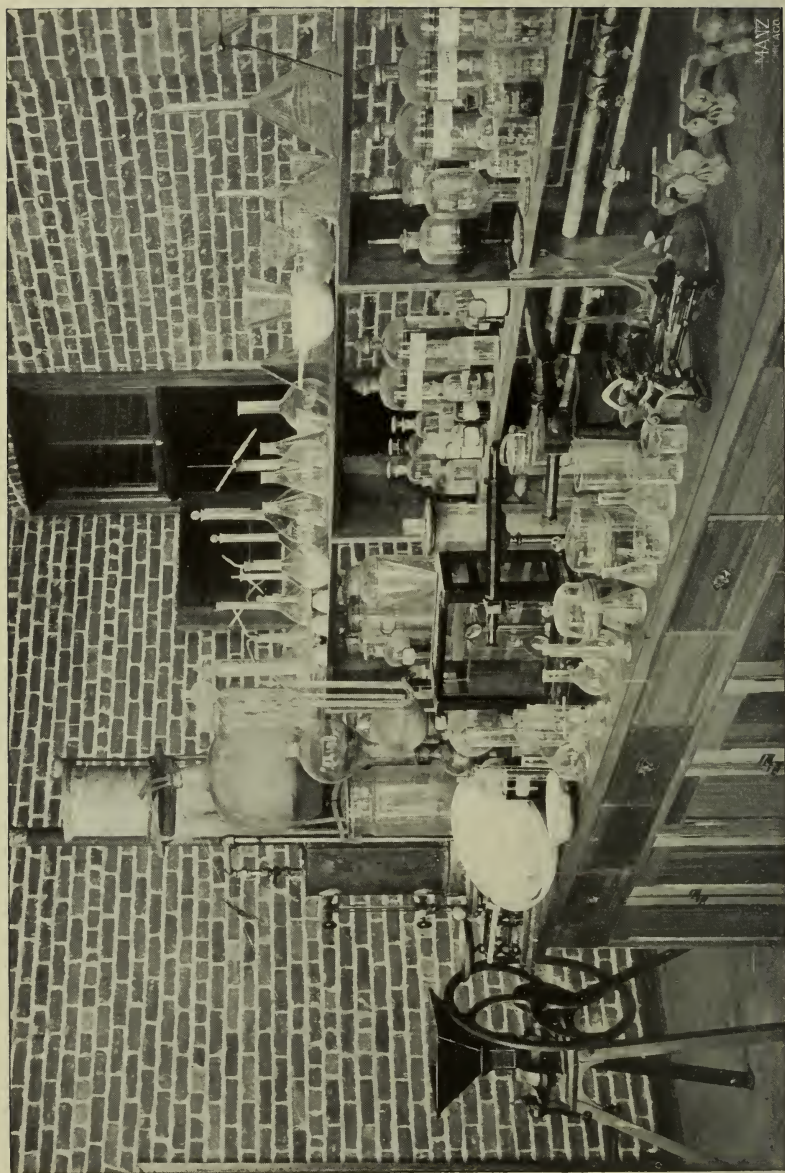
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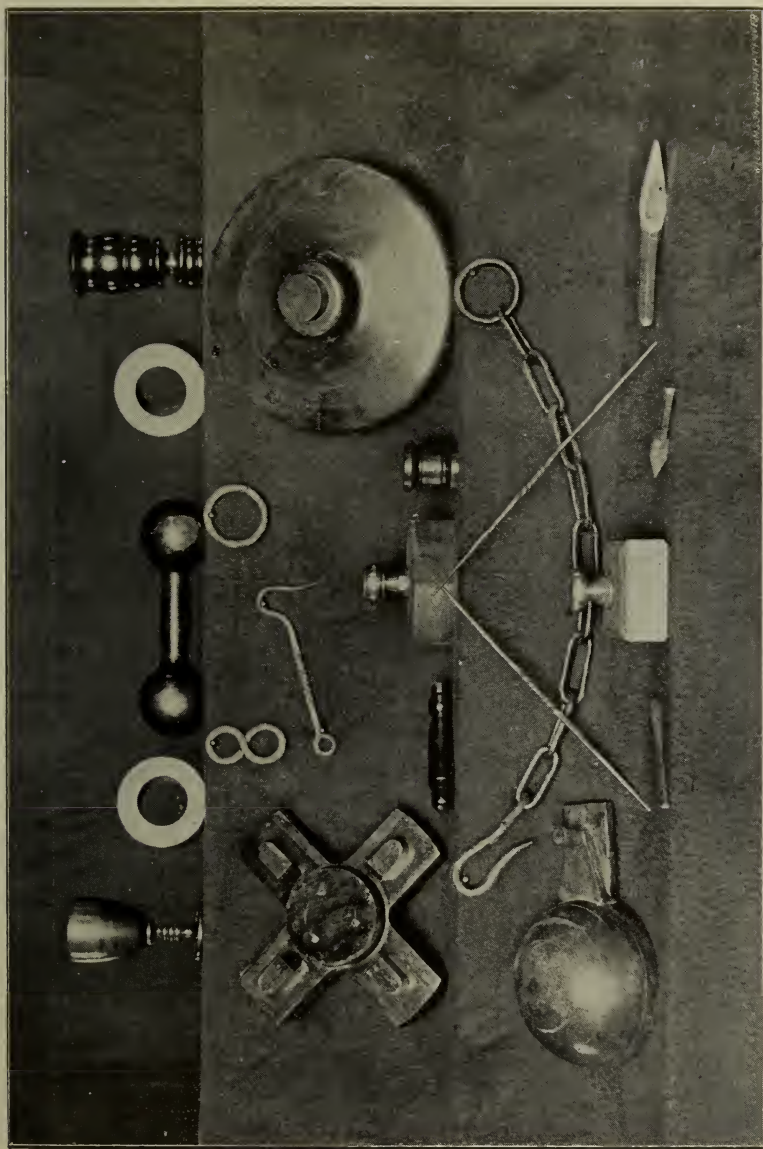


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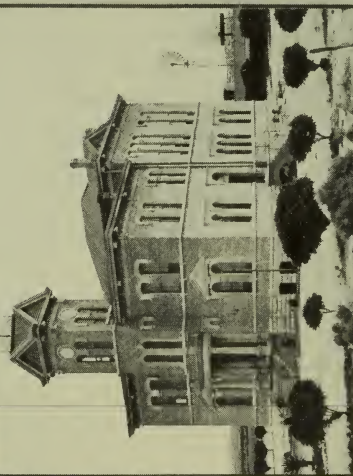






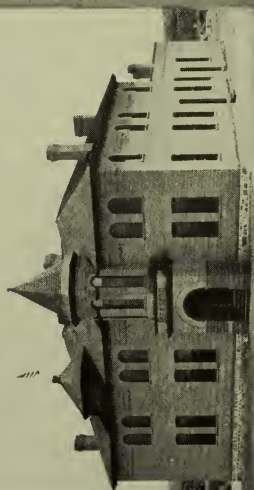


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# COLLEGE BUILDINGS

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MECHANICAL  
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TWELFTH ANNUAL REGISTER

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New Mexico College

OF

Agriculture and Mechanic Arts

MESILLA PARK

---

Catalogue of Students for 1901-1902

AND

Announcements for 1902-1903

---

SANTA FE, N. M.:  
NEW MEXICAN PRINTING COMPANY.  
1902.



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P10536

## CALENDAR FOR 1902=1903

September	8-9, 1902, Examination of candidates for admission and re-examination of deficient students.
"	8-9-10, 1902, Matriculation of students.
"	10-11, 1902, Assignment of students to classes and assignment of work by class instructors.
"	12, 1902, Regular class work of first term begins.
November	21, 1902, Recitations of first term end.
"	24-26, 1902, Examination of classes for first term's work.
"	27, 1902, Thanksgiving holiday.
December	1, 1902, Assignment of students to classes for second term and assignment of work by class instructors.
"	2, 1902, Regular class work of second term begins.
"	20, 1902, Christmas vacation begins.
January	4, 1903, Christmas vacation ends.
February	22, 1903, Washington's Birthday—holiday.
"	27, 1903, Recitations of second term end.
March	2-3-4, 1903, Examination for second term's work.
"	9, 1903, Assignment of students to classes for third term and assignment of work by class instructors.
"	10, 1903, Regular class work of third term begins.
May	1, 1903, Field Day.
"	22, 1903, Recitations of third term end.
"	25-27, 1903, Examination for third term's work; Senior vacation.
"	30, 1903, Memorial Day—holiday.
"	31, 1903, Baccalaureate Sermon.
June	1, 1903, P. M., Address to Columbian Literary Society.
"	2, 1903, Alumni meeting.
"	3, 1903, Commencement exercises.

#### **BOARD OF REGENTS**

Granville A. Richardson. President, Roswell, N. M.  
H. B. Holt, Secretary and Treasurer, Las Cruces, N. M.  
P. H. Curran, Las Cruces, N. M.  
Seaman Field, Deming, N. M.  
W. A. Cooper, Santa Fe, N. M.

#### **Advisory Members**

Hon. Miguel A. Otero, Governor of New Mexico, Santa Fe,  
N. M.  
Hon. J. Francisco Chaves, Supt. of Pub. Instruction, Santa  
Fe, N. M.



## FACULTY

LUTHER FOSTER, B. S., Iowa State College, 1872; M. S. Agr.,  
ibid., 1888. President and Professor of Political Eco-  
nomy.

CLARENCE T. HAGERTY, B. S., Notre Dame University, 1890;  
M. S., ibid., 1895. Professor of Mathematics and  
Astronomy.

ARTHUR GOSS, B. S., Purdue University, 1888; A. C., ibid.,  
1889; M. S., ibid., 1895. Professor of Chemistry.

HIRAM HADLEY, A. M., Earlham College, 1885. Professor of  
History and Philosophy.

ELMER O. WOOTON, B. S., Earlham College, 1889; A. M., ibid.,  
1896. Professor of Biology, and in charge of Geology.

FRANCIS E. LESTER, Registrar and Principal of Department  
of Stenography.

JOHN DABNEY TINSLEY, B. S., New Mexico Coll. of Agr. and  
Mech. Arts, 1890. Professor of Physics.

ALICE HORNING, B. S., Agricultural College of Oregon, 1882.  
Professor of Domestic Science. Dean of Women, and  
Matron of the Women's Hall.

JOHN J. VERNON, B. S. AGR., Iowa State College, 1897. Pro-  
fessor of Agriculture and Horticulture and Superin-  
tendent of Grounds.

D. M. RICHARDS, A. B., Oberlin College. Principal of the Pre-  
paratory Department.

EDITH DAVIS, B. A., University of Kansas, 1897. Professor  
of English.

\*WILLIAM ALEXANDER SUTHERLAND, B. S., New Mexico Coll.  
of Agr. and Mech. Arts, 1898. Professor of Spanish  
and Latin.

CHARLES MILLS, Professor of Mechanical Engineering.

RALEIGH FREDERICK HARE, B. S., Alabama Polytechnic Insti-  
tute, 1892; M. S., ibid, 1893. Assistant Professor of  
Chemistry.

\*Resigned, June, 1902.

FABIAN GARCIA, B. S., New Mexico Coll. of Agr. and Mech. Arts, 1894. Assistant Professor of Horticulture.

**Other Officers of Instruction**

GERALDINE COMBS, Assistant in Preparatory Department.

ARCHIE BRUCE SAGE, B. S., New Mexico Coll. of Agr. and Mech. Arts, 1900. Assistant Professor in Mechanical Engineering Department.

CHARLOTTE A. BAKER, Librarian and Assistant in English.

FRANCES ELIZABETH BLAKESLEY, B. L., Washburn College, 1895. Assistant in the Preparatory Department.

JOHN OLIVER MILLER, B. S., University of Colorado, 1899. Assistant to the Registrar and in the Department of Stenography and Typewriting.

ELIZABETH E. SHIMER. Assistant in the Preparatory Department.

CLARA LOUISE FOSTER, B. S., Utah Agric. College, 1897. Assistant in Domestic Science.

JAMES STANISLAUS MACGREGOR, B. S., New Mexico Coll. of Agr. and Mech. Arts, 1902. Assistant in Mechanical Engineering Department.

PINKIE FORD, Assistant in the Department of Stenography and College Stenographer.

CHARLES L. POST, M. S., New Mexico Coll. of Agr. and Mech. Arts, 1901. Assistant in the Department of Chemistry.

———. Assistant in Agriculture.

## FACULTY COMMITTEES

### Course of Study

Clarence T. Hagerty, *Chairman*

E. O. Wooton.

Chas. Mills.

D. M. Richards.

J. J. Vernon.

### Catalogue

E. O. Wooton, *Chairman*

W. A. Sutherland.

D. M. Richards.

### Judiciary

Arthur Goss, *Chairman*

C. T. Hagerty.

H. Hadley.

### Buildings and Grounds

Chas. Mills, *Chairman*

J. J. Vernon.

F. Garcia.

### Entertainment

Alice Horning, *Chairman*

W. A. Sutherland.

Edith Davis.

### Extension Work and Advertising

H. Hadley, *Chairman*

F. E. Lester.

J. D. Tinsley.

### Student Conference

D. M. Richards, *Chairman*

Alice Horning.

Arthur Goss.

### Boarding

Francis E. Lester, *Chairman*

R. F. Hare.

Alice Horning.

### Library

J. D. Tinsley, *Chairman*

Edith Davis.

E. O. Wooton.

Miss Baker, *ex-officio*.

NOTE: The president is *ex-officio* a member of all committees.

## GENERAL STATEMENT

### Location



The New Mexico College of Agriculture and Mechanic Arts is located at Mesilla Park, Doña Ana County. Mesilla

Park is situated about the Middle of the Mesilla Valley on the main line of the Santa Fe Railway connecting Albuquerque and El Paso, Texas, about 40 miles from the latter city. Two miles and a half north of the college is the town of Las Cruces, with a population of about 4,000 souls. Here will be found a public school, two mission schools, and a Catholic academy for girls; while Presbyterians Methodists, Baptists and Roman Catholics hold regular church services, to which students are always welcome. At Mesilla Park there is a public school, which fits students for entrance to the Preparatory department of the College, and the Episcopalians hold regular services here, in their newly completed chapel.

### Origin

The New Mexico College of Agriculture and Mechanic Arts, under a slightly different name, was established by an act of the Twenty-eighth Assembly of New Mexico, approved February 28, 1889. The purpose of the institution is defined in Section 19 of this act:

“The Agricultural College created and established by this act shall be non-sectarian in character, and devoted to practical instruction in agriculture, mechanic arts, natural sciences connected therewith, as well as a thorough course of instruction in all branches of learning bearing upon agriculture and other industrial pursuits.”

The branches in which instruction may be given are set forth as follows in Section 20 of the same act:

“The course of instruction of the College hereby created shall embrace the English language, literature, mathematics, philosophy, civil engineering, chemistry, animal and vegetable anatomy and physiology, the veterinary art, entomology, geology, and political, rural, and household economy, horticulture, moral philosophy, history, mechanics, and such other sciences and courses of instruction as shall be prescribed by the regents of this institution of learning.”

By Section 25 of the same act, the assent of the Legislative Assembly was given to the establishment of Experiment Stations within the Territory of New Mexico in connection with the Agricultural College, in pursuance of the act of Congress approved March 2, 1887;—the Hatch Act.

#### **Income**

The revenues of this College are derived from the following sources:—

1. Students' fees.
2. Sale of farm products.
3. Territorial tax and special appropriations.
4. The United States, under Congressional Act of August 30, 1890—the Morrill fund.
5. The United States, under Congressional Act of March 2, 1887—the Hatch fund.

The money received from fees and farm products has, so far, been very limited, and has been applied to the payment of such expenses as are not provided for by either act of Congress.

The Territorial Act creating the institution provided for an annual levy of one-fifth of a mill, commencing with the

year 1889. This levy now yields an annual income of about \$6,500.

The Morrill Fund was created by the United States law of August 30, 1890, "for the more complete endowment and support of the Colleges of Agriculture and Mechanic Arts in the several States and Territories." It is paid over to them before July 31, of each year. The College received this fund first in 1890, to the amount of \$15,000. Henceforth the fund will amount to \$25,000. This fund can be applied *only* "to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic sciences, with special reference to their application in the industries of life, and to the facilities for such instruction." *No part of this fund may be used for building or repairs, or for ordinary running expenses, such as salaries of administrative officers,—as president, clerk, librarian, etc.,—equipment of the library, and ordinary furniture, stationery, printing, etc., or for teaching any subject not referred to in this Act.* The theory of the federal government in accordance with which these appropriations have been made, is that the State or Territory must provide the buildings and grounds and keep them in repair and must also provide for all the general administrative expenses of the college, and that the federal appropriation is to be used only for the purposes of paying teachers and supplying the necessary books and apparatus for teaching the specific subjects mentioned in the Act.

By the United States law of March 2, 1887, the *Hatch Act*, appropriations are made for the maintenance of Experiment Stations in connection with Agricultural Colleges in the several States and Territories. For the support of each station there is set apart the sum of \$15,000 a year, payable quarterly. This money must be used for "paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results." Bulletins showing progress must be printed each quarter, and sent to each newspaper in the Territory and to all farmers who apply for them. This fund first became available for this College in



1889-90, to the amount of \$10,000. Since July 1, 1890, \$15,000 a year has been received. *After the first year, only five per cent of this fund may be used to erect, enlarge or repair buildings for the use of the Experiment Station; and no part of it may be applied to the expenses of instruction or to general college purposes. It must be applied exclusively to the carrying on of agricultural experiments and to the dissemination of the results thereof.*

### Endowment

A bill has recently been passed by Congress granting this College 100,000 acres of public land, the proceeds of which are to form a permanent endowment fund. If this land be carefully located, it can in time be made to yield the College a fair endowment.

### Requirements for Admission

Candidates for admission to the *Freshman* year will be admitted without examination upon completion of the subjects of the Senior Preparatory, or "Sub-Freshman," year, or on a certificate showing that the same or an equivalent amount of work has been completed at any of the following High Schools:

Albuquerque High School.  
Deming High School.  
El Paso High School.  
Las Vegas High School.  
Raton High School.  
Roswell High School.  
Gallup High School.

Other candidates must pass examinations in the following subjects:

*English.*—Lockwood's Lessons in English, or its equivalent. No applicant will be admitted who is unable to write English fairly correct in spelling, punctuation, paragraphing, and so forth, and free from gross grammatical and rhetorical errors. Some knowledge of literature is also required.

*General History.*—Myers' General History or Sheldon's General History, or their equivalent.

*Algebra.*—Milne's Academic Algebra through logarithms, or its equivalent.

*Physics.*—Shaw's Physics by Experiment, or its equivalent.

*Physical Geography.*—Maury's Physical Geography, or its equivalent.

*Physiology.*—Martin's Human body (briefer course), or its equivalent.

*Civil Government.*—McCleary's Studies in Civics, or its equivalent.

*Free-hand Drawing.*—At least a year's thorough work.

*Arithmetic.*—White's Complete Arithmetic, or its equivalent.

*History of the United States.*—Fiske's School History or Barne's Brief History of the United States, or their equivalent.

*Geography.*—Maury's Manual of Geography, or its equivalent.

Students coming from other colleges whose requirements for admission are substantially equivalent to those of this college may be admitted to corresponding classes here, provided they bring certificates showing amount of work completed. Other candidates for advanced standing will be examined in the subjects prescribed for admission, and also in the undergraduate studies which they desire to be credited with.

All applicants for admission must furnish satisfactory evidences of good moral character. The President and Faculty reserve the right to reject students who appear to be too immature to live away from home.

# **COURSES OF STUDY** **THE COLLEGIATE COURSES OF STUDY ARE AS FOLLOWS** **Freshman Year**

AGRICULTURE	MECHANICAL ENGINEERING	DOMESTIC SCIENCE	GENERAL
FIRST TERM			
*1 Mathematics (Geom. Pl.), 5. 1 English, 5. 2 Zootechny (Livestock), 2. 1 Biology (Zool.), 10 P. 1 Horticulture (Greenhouse), 2. 3 Horticulture (Greenhouse), 2 P.	1 Mathematics (Geom. Pl.), 5. 1 English, 5. 1 Spanish or 1 Latin, 5. 27 Mech. Engin. (Woodturning), 6 P. 19 Mech. Engin. (Forging), 4 P.	1 Mathematics (Geom. Pl.), 5. 1 English, 5. 1 Spanish or 1 Latin, 5. 1 Biology (Zool.), 10 P.	1 Mathematics (Geom. Pl.), 5. 1 English, 5. 1 Spanish or 1 Latin, 5. 1 Biology (Zool.), 10 P.
SECOND TERM			
2 Mathematics (Geom. Pl.), 5. 2 English, 5. 2 Zootechny (Live stock), 2. 2 Biology (Zool.), 10 P. 2 Horticulture (Greenhouse), 2. 4 Horticulture (Greenhouse), 2 P.	2 Mathematics (Geom. Pl.), 5. 2 English, 5. 2 Spanish or 2 Latin, 5. 20 Mech. Engin. (Forging), 6 P. 1 Mech. Eng. (Drawing), 4 P.	2 Mathematics (Geom. Pl.), 5. 2 English, 5. 2 Spanish or 2 Latin, 5. 2 Biology (Zool.), 10 P.	2 Mathematics (Geom. Pl.), 5. 2 English, 5. 2 Spanish or 2 Latin, 5. 2 Biology (Zool.), 10 P.
THIRD TERM			
3 Mathematics (Geom. Sol.), 5. 3 English, 5. 3 Zootechny (Live stock), 2. 3 Biology (Botany), 10 P. 5 Horticulture, 2+2 P.	3 Mathematics (Geom. Sol.), 5. 3 English, 5. 3 Spanish or 3 Latin, 5. 21 Mech. Eng. (Woodwork), 6P. 2 Mech. Eng. (Drawing), 4 P.	3 Mathematics (Geom. Sol.), 5. 3 English, 5. 3 Spanish or 3 Latin, 5. 3 Biology (Botany), 10 P.	3 Mathematics (Geom. Sol.), 5. 3 English, 5. 3 Spanish or 3 Latin, 5. 3 Biology (Botany), 10 P.

\* The number or letter preceding the subject is the number by which each course is referred to in the college records. The number following each subject indicates the number of hours per week devoted to the subject. P indicates any kind of laboratory or other practice work, two hours of which is accepted as the equivalent of one hour of recitation or lecture work.

Sophomore Year

AGRICULTURE	MECHANICAL ENGINEERING	DOMESTIC SCIENCE	GENERAL
FIRST TERM			
<p>4 Mathematics (Trig.), 5. 4 English, 5. 1 Physics, 4+2 P. 1 Spanish or 1 Latin, 5.</p>	<p>4 Mathematics (Trig.), 5. 4 English, 5. 1 Physics, 4+2 P. 22 Mech. Engin. (Pattern Mak.), 10 P.</p>	<p>4 Mathematics (Trig.), 5. 4 English, 5. 1 Physics, 4+2 P. 4 Spanish or 4 Latin, 5.</p>	<p>4 Mathematics (Trig.), 5. 4 English, 5. 1 Physics, 4+2 P. 4 Spanish or 4 Latin, 5.</p>
SECOND TERM			
<p>1 Agronomy (Soils and Crops), 3. 4 Zootechny (Prin. of Breed.), 2. 2 Physics, 4+2 P. 2 Spanish or 2 Latin, 5. 1 Surveying, 1+6 P. 2 Surveying (Topog. Draw.), 2 P.</p>	<p>5 English, 5. 2 Physics, 4+2 P. 7 Mech. Engin. (Desc. Geom.), 5. 1 Surveying, 1+6 P. 3 Mech. Engin. (Draw.), 4 P.</p>	<p>5 English, 5. 2 Physics, 4+2 P. 5 Spanish or 5 Latin, 5. 1 Domestic Science (Cooking 6 P., and Sewing 4 P.), 10 P.</p>	<p>5 English, 5. 2 Physics, 4+2 P. 5 Spanish or 5 Latin, 5. 1 Surveying, 1+6 P. 2 Surveying (Topog. Draw.), 2 P.</p>
THIRD TERM			
<p>2 Agronomy (Soils and Crops), 4. 6 Horticulture (Forestry), 2. 3 Spanish or 3 Latin, 5. 7 Horticulture (Olericulture) 2+2 P. 1 Soil Physics, 8 P. 4 Biology (Bacteriol.), 2.</p>	<p>6 English, 5. 3 Physics, 4+2 P. 5 Mathematics (High. Alg.), 5. 23 Mechan. Engin. (Foundry), 6 P. 4 Mech. Engin. (Machine Design.), 4 P.</p>	<p>6 English, 5. 3 Physics, 4+2 P. 6 Spanish or 6 Latin, 5. 2 Domestic Science (Cooking 2 P., and Sewing 4 P.), 6 P. 4 Biology (Bacteriol.), 2.</p>	<p>6 English, 5. 3 Physics, 4+2 P. 6 Spanish or 6 Latin, 5. 1 History (Med. and Mod.), 5.</p>

## Junior Year

AGRICULTURE	MECHANICAL ENGINEERING	DOMESTIC SCIENCE	GENERAL
FIRST TERM			
7 English, 1. 1 Chemistry, 5. 8 Horticulture (Pomology), 4. 11 Horticulture (Entomol.), 3. 1 Meteorology, 2 Elective, 5.	7 English, 1. 1 Chemistry, 5 6 Mathematics (Anal. Geom.), 5. 8 Mech. Engin. (Elem. Mech.), 4. 24 Mech. Eng. (Iron work), 6 P. 5 Mech. Engin. (Machine Design), 4 P	7 English, 1. 1 Chemistry, 5. 1 Astronomy, 5+2 P. 3 Domestic Science (Canning etc.), 6 P. 14 Horticulture (Floriculture), 2+2 P. Elective, 2.	7 English, 1. 1 Chemistry, 5. 1 Astronomy, 5+2 P. Elective, 8.
SECOND TERM			
8 English, 1. 2 Chemistry, 10 P. 1 Political Economy, 4. 5 Zootechny (Feeding), 5. 9 Horticultural (Pomology), 2 P. Elective, 5.	8 English, 1. 2 Chemistry, 10 P. 7 Mathematics (Calculus), 5. 10 Mech. Engin. (Str. of Mater.), 5. 9 Mech. Eng. (Mechanism), 4.	8 English, 1. 2 Chemistry, 10 P. 1 Political Economy, 4. 2 Astronomy, 1+2 P. 4 Domestic Science (Cooking), 8 P. Elective, 4.	8 English, 1. 2 Chemistry, 10 P. 1 Political Economy, 4. 2 Astronomy, 1+2 P. Elective, 8.
THIRD TERM			
9 English, 1 3 Chemistry, 8 P. 5 Biology (Plant Phys.), 3+2 P 10 Horticultural (Pomology), 2 P. 12 Horticulture (Landsc. Gard.), 2. Elective, 8.	9 English, 1. 3 Chemistry, 8 P 8 Mathematics (Calculus), 5. 11 Mech. Eng. (Eng. Struct.), 5. 12 Mech. Engin. (Steam Boilers), 5.	9 English, 1. 3 Chemistry, 8 P 6 Biology (Physiol.), 5. 3 Astronomy, 1+2 P. 5 Domestic Science (Invalid Cook), 6 P. 7 Horticultural (Olericulture), 2+2 P. Elective, 2.	9 English, 1. 3 Chemistry, 8 P. 6 Biology (Physiol.), 5. 3 Astronomy, 1+2 P. Elective, 8.

Senior Year

AGRICULTURE	MECHANICAL ENGINEERING	DOMESTIC SCIENCE	GENERAL
FIRST TERM			
<p>10 English, 2. 4 Chemistry (Agr. Chem.), 3. 3 Agronomy (Rural Engin.), 2+2 P. 6 Zootechny (Dairying), 3+4 P. 1 Bookkeeping, 5. Elective, 2.</p>	<p>10 English, 2. 13 Chemistry, 10 P. 13 Mech. Engin. (Steam Eng.), 4. 25 Mech. Engin. (Mach. Shop), 4 P. 6 Mech. Engin. (Machine Design), 4 P. 1 Bookkeeping, 5.</p>	<p>10 English, 2. 13 Chemistry, 10 P. 1 Philosophy (Psychol.), 5. 6 Domestic Science (Dietetics), 2. 7 Domestic Science (Dress making), 2 P. 1 Bookkeeping, 5.</p>	<p>10 English, 2. 13 Chemistry, 10 P. 1 Philosophy (Psychol.), 5. 1 Bookkeeping, 5. Elective, 3.</p>
SECOND TERM			
<p>11 English, 2. 1 Geology, 5. 5 Chemistry (Agr. Chem.), 6 P. 4 Agronomy (Rural Econ.), 3. 13 Horticulture (Plant Breeding), 2. Elective, 5.</p>	<p>11 English, 2. 1 Geology, 5. 14 Chemistry, 4. 15 Mech. Engin. (E. and B. Tests), 4 P. 26 Mech. Engin. (Mach. Shop), 6 P. 14 Mech. Engin. (Hydraulics), 5.</p>	<p>11 English, 2. 1 Geology, 5. 2 History (Hist. Civiliz.), 5 8 Domestic Science (H. Sanitation), 2. 9 Domestic Science (Dress-making), 2 P. Elective, 5.</p>	<p>11 English, 2. 1 Geology, 5. 2 History (Hist. Civiliz.), 5. Elective, 8.</p>
THIRD TERM			
<p>12 English, 2 5 Agronomy (Pract. Agr.), 5. 6 Chemistry (Agr. Chem.), 6 P. Thesis, 5. Elective, 5.</p>	<p>12 English, 2. 16 Mech. Engin. (Anal. Mech.), 5. 17 Mech. Engin. (Elect. Eng.), 5. 18 Mech. Engin. (Roofs and Bridges), 4 P. Thesis, 6.</p>	<p>12 English, 2. 10 Domestic Science (Chem. of Foods), 3. 11 Domestic Science (Chafing-dish), 2 P. 12 Domestic Science (Dress-making), 2 P. Thesis, 5. Elective, 8.</p>	<p>12 English, 2. 2 Geology, 5. Thesis, 5. Elective, 8.</p>



**Electives\***

FIRST TERM	SECOND TERM	THIRD TERM
Adv. Chemistry, 6 P. Adv. Physics, 6 P. Adv. Botany, 6 P. Adv. Soil Physics, 6 P. Adv. Zoology, 4 P. Domestic Science, 4 P. Commercial Spanish, 5. English History, 5	Adv. Chemistry, 6 P. Adv. Physics, 6 P. Adv. Botany, 6 P. Adv. Soil Physics, 6 P. Adv. Zoology, 4 P. Domestic Science, 4 P. Commercial Spanish, 5. English History, 5. Applied Psychology, 5. Bookkeeping, 5.	Adv. Chemistry, 6 P. Adv. Physics, 6 P. Adv. Botany, 6 P. Adv. Soil Physics, 6 P. Adv. Zoology, 4 P. Domestic Science, 4. Commercial Spanish, 5. Adv. Amer. History, 5. Theory & Practice of Teaching, 5. Bookkeeping, 5.

\* NOTE ON ELECTIVE STUDIES.- The figures following the Elective Studies indicate the minimum amount of time that may be devoted to them. Whenever the other work of the students or of the instructor does not prevent, a greater amount of time may be given to the subject.

The elective studies are not assigned to any particular year, but may be taken whenever the student is prepared for them, and has the necessary time at his disposal, subject always to the approval of the faculty.

In addition to the courses expressly designated as Elective Studies, any study pursued in the College, and not prescribed in the course of study that is being followed by the student in question, may be elected by him. A student in the General Course, for example, may elect a study prescribed for Agricultural students; or, to give a more specific example, a Senior in the Engineering Course (who has four hours free for an elective in the second term) may elect Political Economy, which is given in the Junior year of the General and Agricultural Courses, provided it is given at an hour at which he is free from other engagements.

**Senior Preparatory Year.†**

FIRST TERM	SECOND TERM	THIRD TERM
C English, 4. C Mathematics (Algebra), 5. B History (Grecian etc.), 4. A Agronomy (Elementary), 3, or B Horticulture (Floriculture), 2+2 P. B Mech. Engin. (Drawing), 2 P. D. Mech. Engin. (Carpentry), 6 P. or C Domestic Science, 6 P.	B English, 4. B Mathematics (Algebra), 5. A History (Roman etc.), 4. A Horticultural (Elementary), 2+2 P. A Mech. Engin. (Drawing), 2 P. C Mech. Engin. (Carpentry), 6 P. or B Domestic Science, 6 P.	A English, 4. A Mathematics (Algebra), 5. A Chemistry, 4. A Biology (Botany), 4. A Zootechny (Live Stock), 3, or A Domestic Science, 1+4 P.

† NOTE.—The Senior Preparatory Classes are taught by the College instructors, not by the teachers of the Preparatory Department, and the students are under the immediate jurisdiction of the College faculty, instead of under that of the principal of the Preparatory Department.

### THE ELECTIVE SYSTEM

By consulting the courses of study offered by this institution (pp. 14-17) it will be seen that there are four courses outlined, three of which are of a more or less specialized character. Each of these latter is designed to fit the student for some special line of work, which he has decided to follow before entering the course. Beside their strictly technical subjects, they contain all those general educational and cultural subjects that are considered to be of most value to technical students, and which it was possible to introduce into these courses. This arrangement allows very little selection of work upon the part of the student, except that made when entering his particular course. Mechanical engineers have no choice of work. Agricultural men may elect a second year of language and a small number of other cultural subjects or more technical work, if they so desire. The domestic science course allows a certain amount of election which may be turned either to cultural work or to further technical work in that department.

The general course, however, is designed to include, as required work, all those subjects which are necessary in any general course, and at the same time allow the student to select a large proportion of his work. The facilities offered and the time allowed are so arranged that a student may specialize in language (Spanish, Latin or English), literature (English or American), history, psychology, pedagogy, chemistry, physics, or biology, or may take a certain amount of technical training in agriculture, horticulture, mechanical engineering or domestic science. By this arrangement a student by entering the general course, may take any special course of his own choosing, which the institution is able to furnish.

#### Special Courses

Students of mature years, who cannot remain long enough to take a full course, may be allowed to take special courses. The faculty reserves the right to refuse such requests, or to order such modifications as may seem best for the student

and the college. No degrees are granted for special work, but those who perform such work in a satisfactory manner will receive certificates.

### Degrees

The degree of *Bachelor of Science (B. S.)* is conferred upon students who satisfactorily complete the work prescribed in any of the collegiate courses of study, but in order to receive the B. S. degree students are required to spend at least one year, immediately before graduation, in this institution.

The degree of *Master of Science (M. S.)* is conferred upon students of this institution who after taking the degree of B. S. pursue for at least one year, or for two years as non-resident students, a course of study approved by the faculty, pass an examination on the same, and present a satisfactory thesis. Students of other institutions of similar character and equal rank, holding the bachelor's degree, desiring to take the M. S. degree from this institution are required to pursue here for at least one year, a course of study approved by the faculty, pass an examination on the same and present a satisfactory thesis.



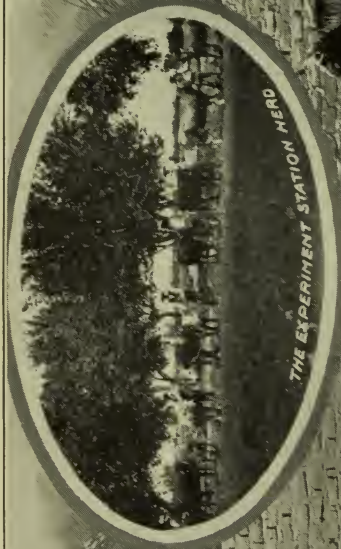
PRESIDENT'S OFFICE



REGISTRAR'S OFFICE







THE EXPERIMENT STATION HERD



SHORTHORN BULL



AGRICULTURAL BUILDING



HEREFORD BULL

## DEPARTMENTS OF INSTRUCTION

### AGRICULTURE AND HORTICULTURE

PROFESSOR VERNON

ASSISTANT PROFESSOR GARCIA

ASSISTANT



The course in agriculture is designed to combine, in their proper proportions, that amount of theoretical study with practical training illustrative of the theory learned, which will produce a well rounded agriculturist and at the same time a practical resourceful man. To this end the course is strong in those sciences, botany and chemistry in their various branches, which form important aids to applied agriculture. A certain number of other subjects of educational and practical value are included, notably the

study of the Spanish language, proficiency in which opens a new field to the scientific agriculturist among Spanish speaking peoples. To all this is added a large amount of practical work in agriculture and horticulture under competent instruction and with a modern equipment, while a certain amount of choice is allowed in the selection of the work of the last two years. The instruction is given by text books, lectures, laboratory practice and field observation.

This course fits young men for the various agricultural pursuits: farming, stockraising, dairying, fruit growing, nursery business, floriculture and market gardening. It also prepares them for professorships of Agriculture, Horticulture and Animal Husbandry in agricultural colleges, as well as for scientific aids in the United States Department of Agriculture. The demand for trained men in these latter positions has been so great, that, in recent years, almost all agricultural graduates have been called into college or experiment station work.



**Agronomy, or Agriculture Proper**

A. *Elementary Agriculture.* Introductory principles. The work will be general and of a popular nature. Principles of Agriculture by Bailey will be used as a text, supplemented by lectures. *Required of all Senior Preparatory men, first term, 3 hours.*

1, 2. *Soils and Field Crops.* Preparation of the soil, plant growth, selection of seed, germination under irrigation systems, cultivation, harvesting, storage, marketing.

Morrow and Hunt's *Soils and Crops of the Farm*, King's *The Soil*, and Roberts' *The Fertility of the Land* form the basis for the work. *Required of Agricultural Sophomores, second term, 3 hours, and third term, 4 hours. Credit 84 hours.*

3. *Rural Engineering.* Planning ditch systems, application of water to land, economic use of fields and crops, buildings and machinery. *Required of Agricultural Seniors, first term, 2 hours + 2 hours practice. Credit 36 hours.*

4. *Rural Economics.* History of Agriculture, farm management, and rural law. *Required of Agricultural Seniors, second term, 3 hours. Credit 36 hours.*

5. *Practical Agriculture.* Scientific and practical problems in general agriculture as applied to the farm and ranch. Special effort is made to apply the principles discussed to New Mexico agriculture. *Required of Agricultural Seniors, third term, 5 hours. Credit 60 hours.*

**Zootechny, or Animal Industry**

This course aims to meet the growing needs of the territory, inasmuch as stock raising is one of the leading industries. The subjects are pursued from a practical and scientific standpoint, having in view the thorough equipment of young men for successful work in breeding, care, and management of large herds.

A. *Live Stock and Score-card.* Breeds of animals; cattle, horses, sheep and swine. A preliminary study with score-card practice. *Required of all male Senior Preparatory students, third term, 3 hours.*

1, 2, 3. *Live Stock.* This course includes a study of the history, development, characteristics, selection, care and management, points of utility, etc., of the different breeds of cattle, horses, sheep and swine. Special attention is given to a discussion of the breeds best adapted to New Mexico conditions. The subject matter of the text is supplemented by lectures. Throughout the course in live stock practical demonstration of the various points under discussion is made with individual animals of the college herd; also, occasional trips will be planned having in mind a study of the breeds, methods of handling, and local conditions of the various herds in this section.

Score-card practice is coincident with the study of breeds. Animals are brought before the class for demonstration and scoring. Lovelock's American Standard of Excellence, and other recognized standards will be followed in judging cattle, sheep and swine.

The object of the study is to insure a familiarity with the characteristics of the leading breeds, so that students are enabled to become competent judges of live stock. This work is specially valuable for young men who expect in any way to deal with the live stock interests of the territory. *Required of Agricultural Freshmen throughout the year, 2 hours. Credit 72 hours.*

4. *Principles of Breeding.* This course covers the laws governing the breeding of animals, and includes the principles of heredity, laws of correlation and variation, in and in and cross breeding, parentage, form types, and pedigree. Attention is given to the subject of breeding for beef and for the dairy. *Required of Agricultural Sophomores, second term, 2 hours. Credit 24 hours.*

5. *Stock Feeding.* The subject includes animal nutrition, chemistry of feeding stuffs, nutritive ratios, making rations, and a careful inquiry into the nutritive value of stock-feeds available on the ranches and markets of New Mexico. *Required of Agricultural Juniors, second term, 5 hours. Credit 60 hours.*

6. *Dairying.* The course in dairying comprises a study

of the properties of milk and methods of handling milk and its products in the private dairy and in the thoroughly equipped creamery. Receiving and weighing, testing, separating, ripening cream, churning, pasteurizing and marketing are subjects discussed in class-room. Instruction is also given in the principles of the Cheddar system of making cheese. *Required of Agricultural Seniors, first term, 3 hours  $\frac{1}{4}$ —4 hours practice. Credit 60 hours.*

### Horticulture

B. *Floriculture.* While the work in floriculture is designed to be of a popular and practical nature, yet a few of the more general principles upon which successful floriculture is based will be taught. The student is expected to become acquainted with common floricultural operations, such as making cuttings, mixing soils, potting, repotting, watering, germination of seed, arrangement of flowers in bouquets, etc. *Required of all Senior Preparatory women, first term. 2 hours in class room and 2 hours practice.*

A. *Elementary Horticulture.* Introductory principles. The work will necessarily be elementary in nature yet sufficiently comprehensive to be of practical use, as well as to form a basis for advanced work for those who wish to pursue the subject further. The laboratory work is so arranged as to consist of operations most likely to be useful to the student after leaving college. The student will learn how to start new plants and ornamental shrubs; graft, bud, and top-work; plant, prune, irrigate, etc. *Required of all Senior Preparatory students, second term, 2 hours in class room and 2 hours practice.*

1. *Greenhouse Management.* Work in the greenhouse, with hot-beds, and cold frames occupies an important place among horticultural subjects. Winter grown flowers and vegetables are attracting more attention each year. Varieties of flowers and vegetables adapted to this line of work are studied, and due attention is given to methods of growing them for home supply and for market. *Required of Agricultural Freshmen, first term, 2 hours. Credit 24 hours.*

2. *Greenhouse Construction.* The principles of greenhouse

construction and their heating systems and other appurtenances; hot-beds and their uses; cold-frames, their limitations and adaptations in this region. *Required of Agricultural Freshmen, second term, 2 hours. Credit 24 hours.*

3, 4. *Greenhouse Handicraft.* Application of the principles learned under 1 and 2. Practical work in arrangement and construction, inside and outside the greenhouse; transplanting from greenhouse to cold-frame and into bed and field; general greenhouse benchwork. *Required of Agricultural Freshmen, first and second terms, 2 hours practice. Credit 24 hours.*

5. *Horticulture.* The whole field of propagation is covered under this heading, and includes propagation by seed, separation and division, layering, cuttings, budding, grafting, etc. General nursery management is made a strong feature of the work, and the student is familiarized with nurserymen's methods. The practice in this course affords students opportunity to propagate plants and trees by all the different methods studied in class. This course is an essential to all future horticultural work and forms the foundation for general fruit culture. The Nursery Book by Bailey is the text used. *Required of Agricultural Freshmen, third term, 2 hours and 2 hours practice. Credit 36 hours.*

6. *Forestry.* The study of wind-breaks, home planting, utility of forest plantations, and the general influence of forests on the climate and water courses. The subjects of forest reserves and forest-tree planting will also receive careful attention. *Required of Agricultural Sophomores, third term, 2 hours. Credit 24 hours.*

7. *Olericulture.* General principles underlying vegetable culture; practical work in planning and laying out vegetable gardens; preparing seed beds, planting, transplanting, cultivation, irrigation, and preparing vegetables for market. Bailey's Principles of Vegetable Culture is used as a text. *Required of Agricultural Sophomores and Domestic Science Juniors, third term, 2 hours and 2 hours practice. Credit 36 hours.*

8. *Pomology.* The work in pomology includes all the sub-



jects relating to fruit culture. Evolution, classification, location and climate, wind-breaks; tools and tillage, plans and planting, diseases and insects, thinning, pruning, spraying, irrigation, picking, packing, and marketing are among the subjects presented. The extensive orchards and vineyards on the college farm and several commercial orchards and vineyards in the vicinity afford unusual means of illustration, and students become acquainted with varieties which are adapted to this section. Bailey's Principles of Fruit Growing is the text-book. *Required of Agricultural Juniors, first term, 4 hours. Credit 48 hours.*

9, 10. *Pomology.* Laboratory practice in planting, pruning, thinning, spraying, crossing, irrigating and note taking. *Required of Agricultural Juniors, second and third terms, 2 hours practice. Credit 24 hours.*

11. *Economic Entomology.* This course is designed to give students a fair knowledge of the principle groups of insects of economic importance, especial attention being given to the study of injurious insects and the means of destroying them. *Required of Agricultural Juniors, first term, 3 hours. Credit 36 hours.*

12. *Landscape Gardening.* A study of systems of landscape gardening—comprising such subject matter as laying out and planting residence grounds, railroad, hotel, and public parks; location and setting of houses and other buildings; avenues, drives, walks; trees, shrubs, flowers, lawns; beds and borders; grouping, variation, and color effects; and the general principles involved in the arrangement and planting of home grounds and farm for beauty, comfort and utility. *Required of Agricultural Juniors, third term, 2 hours. Credit 24 hours.*

13. *Plant Breeding.* The student having completed his biological studies is prepared for a discussion of plant breeding. Selection, crossing, variation, and the influence of environment, food, etc. are investigated. *Required of Agricultural Seniors, second term, 2 hours. Credit 24 hours.*

14. *Floriculture.* Advanced work in the care of plants for

the house and greenhouse; general designing of floral decorations, etc. *Required of Domestic Science Juniors, first term, 2 hours and 2 hours practice. Credit 36 hours.*

### Equipment

The farm connected with the College contains about seventy acres of land under irrigation, which is divided into fields and plots for use in demonstrating the class-room work. Grasses, cereals, roots, forage and other farm crops are grown for demonstration and study. The feeds raised on the farm are utilized in feeding experiments and for maintaining stock used in illustration of the principles taught. The Hereford, Short-Horn, and Jersey breeds of cattle are represented in the college herd, affording opportunity for the student to become familiar with thoroughbred and grade stock. A large corral has been completed, which furnishes commodious quarters for the stock and for the storage of feeds and machinery.

The department is well equipped with the latest improved machinery. A gasoline engine, feed-grinder, fodder-shredder and cutter, mowers, harvesting machinery, thresher, bailer, plows, discs, cultivators, drills, seeders, corn planter, bordering machine, weeders, scrapers for leveling, and other modern machinery compromise the equipment in this line. Special effort is made to maintain this feature of the equipment at its best in order to furnish facility for studying machinery used in this as well as other sections of the country, thus broadening the students range of observation and thought.

A pumping irrigation plant has been installed which will give opportunity for studying the possibilities in that line.

The orchards and grounds contain many varieties of apples, pears, peaches, plums, etc., and over sixty varieties of grapes in addition to other small fruits.

The vegetable gardens, flower gardens, greenhouse, and cold-frames, afford excellent opportunity for study and ex-



periment. The arboretum, forestry plantations, and lawns give enlarged facilities for observation and study.

Constant additions are being made to the equipment in all the lines of work. The experimental work of the Experiment Station, carried on by this department may be made an excellent adjunct to the instruction given in class, affording as it does opportunity for the student to follow his particular bent, whether he be interested in dairying, feeding steers or sheep for market, studies in field crops or grasses, work in the orchards, vineyard, vegetables gardens, etc., or any or all of these lines in general, in order to give breadth and depth to his powers in thinking out practical problems in agriculture and horticulture.

*Student Labor.*—In connection with the investigations of the Department there are many opportunities which will enable industrious students to use a certain amount of their time in practical work. This labor is paid for at the rate of from  $7\frac{1}{2}$  cents to 15 cents per hour. It may be added, for those who are interested, that a large amount of work of this nature could have been furnished to students the past year had their desires been known to the Professor in charge. Naturally work of this nature can be made an important aid to those who desire to pay part of their expenses while in College.

## SHORT COURSES IN AGRICULTURE AND HORTICULTURE

While we advise those who expect to become professors or instructors in agricultural schools and colleges to take the four years' course in agriculture and horticulture outlined above, yet we realize that there are many who for various reasons are unable to do this.

Owing to the demand for trained men to fill positions as foremen or superintendents of ranches and dairies, and believing that a territorial institution should offer every possible encouragement to those who desire to fit themselves for their chosen lines of work, a two years' course and a twelve weeks' course in agriculture and horticulture have been arranged.

### TWO YEARS' COURSE IN AGRICULTURE

In order to be admitted to this course students must be at least sixteen years old and possess a good knowledge of Arithmetic, Reading, Spelling, United States History, Grammar and Composition.

#### Two Years' Course in Agriculture.

##### FIRST YEAR

FIRST TERM	SECOND TERM	THIRD TERM
English, 4 Mathematics, 5 Live Stock, 2 Greenhouse Management, 2 Greenhouse Handicraft, 2 P Economic Ent., 3 Carpentry, 6 P. or Elective, 3	English, 4 Mathematics, 5 Live Stock, 2 Princ. of Breeding, 2 Horticulture, 2+2 P Carpentry, 6 P. or Elective, 3	English, 4 Elementary Chemistry, 4 Live Stock, 3 Horticulture, 3+2 P Botany, 4

##### SECOND YEAR

English, 5 Bookkeeping, 5 Pomology, 4 Agr'l. Chemistry, 3+6 P	English, 5 Com. Arithmetic, 5 Soils and Crops, 3 Stock Feeding, 5 Pomology, 2 P	English, 5 Soils and Crops, 4 Olericulture or Vegetable Growing, 3 Forestry, 2 Soil Physics, 8 P Business Forms, 4 P
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This course is designed to prepare young men to become practical farmers and ranchmen, and to be able to fill positions as foremen or superintendents of ranches and dairies.

The course includes much of the work of the regular four years' course in agriculture, besides requiring a number of other studies which have been selected as specially valuable for the student. For information as to the character of the work in each study see discussion under the four years' course in agriculture.

#### TWELVE WEEKS COURSE IN AGRICULTURE AND HORTICULTURE



There are many young men who for various reasons are unable to spend two or more years at college. In order to meet the needs of this class of students, a special course of twelve weeks has been opened for young men who desire to take advantage of the opportunity for a short period of training. The work of the course is of a very practical nature. Only those lines of work have been selected that are of the most value

to the student. The work consists almost wholly of lectures and field practice. The lectures consist of familiar talks on the theory of the subject, while the student will be expected to learn to do the work, by practice, under a trained instructor. For this purpose much time will be spent by the student in the orchard, garden, and field, in the greenhouse, and in the management of the hot-beds and cold-frames.

This course will be given each term of the college year with only sufficient variation in the subject matter taught to suit the seasons of the year.

The course in each term will continue twelve weeks. The

first term's course will begin September 10, 1902. The second term's course will begin December 1, 1902. The third term's course will begin March 9, 1903.

*Requirements for Admission*—Students entering this course must be at least sixteen years of age. There are no entrance examinations required.

FIRST TERM.	SECOND TERM.	THIRD TERM.
Orchard and Flower Garden, 15P.....	Greenhouse, Hot-Beds and Cold-Frames 15P.	Garden and Field, 15P.
Lecture in Pomology 5.	Lecture in Pomology 5.	Lecture in Vegetable Growing 5.
Lecture in Live Stock 5.	Lecture in Economic English, Arithmetic or Entomology, 5	Lecture in Soils and Crops 5.
other studies 10.....	English, Arithmetic or English. Arithmetic or other studies 10.....	other studies 10.

The following is a brief outline of the character of the work in this course:

*Practice Work*.—The laboratory and field practice during the first term consists of picking, grading, packing, and shipping fruits; spraying and pruning fruit trees; planning and planting ornamental grounds and flower gardens; and observation lessons on plants and shrubs best suited to New Mexico. The work of the second term consists of propagation, potting, repotting, and care and management of greenhouse plants; making and management of hot-beds and cold-frames for starting plants, and for the production of winter flowers and vegetables for the home and for market; and other work in hand during this season of the year. Special attention is given to growing and preparing winter vegetables for market. The practice hours in the third term are mostly devoted to the vegetable garden and field. The work embraces laying off grounds, preparing seed beds, sowing, transplanting, irrigating, etc. So far as possible the work is taken up with a view to a knowledge of commercial vegetable growing.

*Pomology*.—The lectures in Pomology consist of practical talks on fruit-growing. The discussions embrace such subjects as selection, planting, and pruning fruit trees and vines;

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NOTE—The figures at the right indicate the number of hours work required each week.

a study of varieties; and points on packing and shipping fruits.

*Economic Entomology.*—The lectures in this subject are intended to give students a fair knowledge of injurious insects and the best methods of destroying them. Familiarity with the characteristics and life history is gained by a study of the insect in class and by locating them in the College orchards or neighboring commercial orchards.

*Live Stock.*—The lectures in this subject are intended to give the student a basis for the study of breeds and characteristics of animals.

*Soils and Crops.*—This subject comprises a discussion of soils in their relation to plant growth, germination of seeds under irrigation, classification of crops and their values, and related topics.

*English.*—This study is intended to assist those who desire to gain a correct knowledge of English.

*Arithmetic and other Studies.*—The student is allowed to elect arithmetic or other studies with the advise and consent of the professor in charge.

## BIOLOGY AND GEOLOGY

PROFESSOR WOOTON

### Biology

The regular required course in biology is only elementary and general in character, and is designed to present the general principles of the subject to the student and at the same time introduce him to a limited number of types of the various larger classes of animals and plants. For this work the lecture and laboratory method is used.

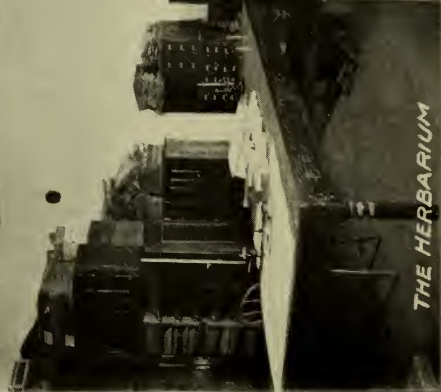
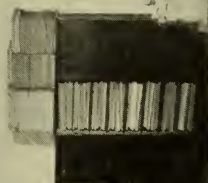
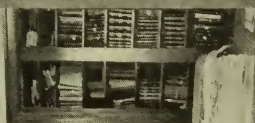
*A. Botany.* A general treatment of the flowering plants, their structure, functions of parts, simpler classification, distribution and economic uses. *Required of all Senior Preparatory students, third term, 4 hours.*

1. *Zoology.* Fundamental principles of life; elementary study of the cell, its parts and functions; introductory treatment of the effects of variation, heredity, environment and

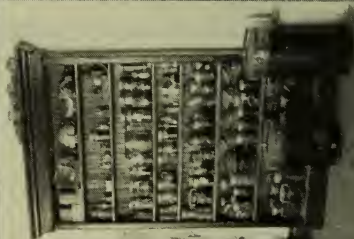








THE HERBARIUM



BIOLOGICAL LABORATORY



use; types studied are invertebrate animals, most of the time being devoted to the gross anatomy and comparative morphology. Text book, Pratt's Invertebrate Zoology. *Required of all regular Freshmen (except Mechanical Engineers), first term, 10 hours practice. Credit 60 hours.*

2. *Zoology.* Continuation of the study of animal life. Types examined are the higher Invertebrates and Vertebrates. Various laboratory manuals are used in the laboratory work, while Parker and Haswell's Text Book is the most important reference book. *Requirements and credit same as in Biology 1, second term.*

3. *Botany.* The comparative morphology of plants; studied by means of representative types of the larger classes. The phylogenetic development of the plant kingdom is set forth as clearly as the time will allow. Text book, Campbell's Evolution of Plants. *Requirements and credit same as in Biology 1, third term.*

4. *Bacteriology.* Lectures and demonstration work on bacteria of water, air, soil and foods and those causing fermentation and disease; preparation of culture media and cultures; staining and determining species. DeBarry and Newman's books used for reference. *Required of Agricultural and Domestic Science Sophomores, third term, 2 hours. Credit 24 hours.*

5. *Plant Physiology.* Lectures and laboratory practice on relations of plants to their environmental stimuli; composition of the plant body, its changes, constructive and destructive. Sachs, Detmer, MacDougal and Ganong used as reference books. *Required of Agricultural Juniors, third term 4 hours, or equivalent in practice. Credit 48 hours.*

6. *Human Physiology.* Lectures, demonstrations and recitations on the anatomy, histology and physiology of the human body. Text book, Martin's Human Body, Advanced Course. *Required of Juniors of the General and Domestic Science Courses, third term, 5 hours. Credit 60 hours.*

*Elective Courses* are offered by this department in either zoology or botany, the particular branch of either subject being largely at the option of the student. Special facilities for

the study of the flowering plants of New Mexico are to be obtained at this institution. All students electing work in this department must have completed Biology 1, 2 and 3. Minimum, 6 hours of practice; credit 36 hours; more time in proportion. All such electives will be accepted as minors for graduate work. Students doing major graduate work in this department must have done one year of elective work in some biological subject beside Biology 1, 2 and 3, and for that major must do not less than 10 hours per week for one year. Arrangements for all elective and graduate work must be made with the head of the department.

### **Equipment**

This department occupies three rooms on the upper floor of the Science Hall. One room is used solely as a laboratory for biology and physiology. It is equipped with gas, water, tables, cases, dissecting and compound microscopes, microtomes, necessary instruments and materials, charts, casts, bacteriological incubators, ovens and a general assortment of apparatus, glassware and reagents for all kinds of biological work. The second room is used as the herbarium. In it are the college herbarium of about 10,000 sheets and the private herbarium of the head of the department, about 3,000 sheets. These two herbaria contain representatives of perhaps 85 per cent. of the species of flowering plants and ferns of the Territory of New Mexico. There are also about 1,000 specimens of fungi and algae represented, the greater portion of these being named fungi of economic importance. The herbarium has abundant case and table room. The third room is used as an office for the department, and contains the departmental library of about 400 volumes, besides numerous pamphlets. Several of the more important botanical periodicals are to be found here.

### **Geology**

The work in this subject is taught by lectures and recitations with prescribed text-book reading. Occasional field work is arranged for as often as facilities will permit.

1. *Dynamical Geology.* Includes dynamical, structural and physiographic geology, some considerable stress being laid upon rocks, rock-making minerals and their derivative soils. Scott's Introduction to Geology and Le Conte's Elements of Geology are used as texts. *Required of all Seniors, second term, 5 hours. Credit 60 hours.*

2. *Historical Geology.* A detailed treatment of the geological history of the earth together with some elementary work in paleontology. *Required of General Course Seniors, third term, 5 hours. Elective to students who have taken Biology 1, 2 and 3 and Geology 1. Credit 60 hours.*

### Equipment

The department of geology occupies one room on the second floor of the Science Hall, and has at its disposal, a collection of the common minerals, the U. S. Geological Survey collection of rocks, a Bausch and Lomb petrographic microscope, a number of fossils and a departmental library including most of the publications of the U. S. Geol. Survey besides the best modern texts and references on the subject.

## PHYSICS

PROFESSOR TINSLEY

### Physics

This course in General Physics is designed to present a survey of the subject and acquaint the students with the fundamental conceptions of matter and energy, their laws and the practical application of these to the problems of engineering, agriculture, etc. The method of instruction is by recitations, lectures, demonstrations and laboratory practice.

A. Introductory principles of the subject. *Required of all Junior Preparatory students, first half year, 5 hours. Professor Richards.*

1. The properties of matter, mechanics of solids and liquids, heat. *Required of all regular Sophomores, first term, 4 hours and 2 hours practice. Credit 60 hours.*

2. Study of sound and light. *Requirements and credit as in Physics 1, second term.*



3. Study of light, electricity and magnetism. *Required of all Sophomores (except Agricultural students), 4 hours and 2 hours practice. Credit 60 hours.*

4, 5, 6. Advanced work, principally experimental, adapted to the needs of the student. Elective for students who have completed 1-3, and a minor for graduate students; *3 hours recitation or 6 hours practice required as a minimum. Credit for 3 hours is 36 hours, additional time in proportion.*

7, 8, 9. Continuation of 4, 5, 6. Elective for those who have completed 1-6 and a major for graduates. *Time requirements and credit as in 4-6.*

### Soil Physics

This course is designed to meet the increasing demand among agriculturists for a more intimate and extensive acquaintance with the soil. It also fits students to become specialists in soil work. In this line the demand for trained men now exceeds the supply for the various soil surveys which are being undertaken by the state and national governments.

1. A brief survey of the origin and physical characters of soils by lectures and recitations; with laboratory and field practice in soil sampling, determinations of moisture, salt content, water holding power, mechanical analyses, classification and mapping. *Required of Agricultural Sophomores, and elective for other students, third term, 8 hours practice. Credit 48 hours.*

2, 3, 4. Advanced work on soils. Elective for those who have completed Soil Physics 1, and as a minor for graduate students.. *Minimum 6 hours practice. Credit for minimum 36 hours.*

5, 6, 7. Advanced work on soils. Elective for those who, wishing to specialize in this line, have completed 1-4, and as a major for graduate students. *Time requirements and credit as in 2-4.*

### Meteorology

1.. Lectures and recitations with accompanying laboratory

practice. A study of the common meteorological instruments, their construction and uses, and those meteorological phenomena having most direct bearing on the agriculture of New Mexico. *Required of Agricultural Juniors and elective for other students, first term, 2 hours. Credit 2½ hours.*

### Equipment

This department occupies three rooms on the second floor of the Science Hall.

The physical laboratory is a large room (50 x 20 ft.) on the south side of the building, well adapted to physics work. It has in it a dark room, supplied with gas and water, for photometric and photographic work, wall cases for the storage of apparatus, lecture table for student work.

The room devoted to soil work is well fitted with work desks, tables and shelving and is supplied with gas and water.

Between the other two is a small room used for some of the meteorological apparatus and for storage.

The physical laboratory is quite well supplied with apparatus for the usual class demonstrations and practice. In addition there are a number of pieces of finer apparatus for advanced work; e. g. Atwood's machine, balances, barometer, thermometers, including one of Greene's standards, spectrometer, polariscope, stereopticon, photographic outfit, Rowland D'Arsonval and tangent galvanometers, resistance box, standard cell and Wheatstone bridge.

The soil physics laboratory is especially well equipped, this being one of the prominent lines of investigation of the Agricultural Experiment Station. The equipment includes electrical apparatus for the determination of "alkali" in soils and waters, electrical soil hygrometers and accessories, soil samplers, drying ovens, balances and weights; shaker, water motor, and centrifuge for mechanical analyses of soils, and the necessary glass and platinum ware and reagents for carrying on investigations of the physical properties of soils and their salt content.



There is also a current meter and register for use in water measurments.

For the work in meteorology, in addition to an evaporation tank and anemometer, there are the usual instruments furnished by the U. S. Weather Bureau to voluntary observers.

## CHEMISTRY

PROFESSOR GOSS

ASST. PROFESSOR HARE



The Department of Chemistry offers exceptional facilities for work in this line. The work required of all students is a general course in the fundamental principles of the subject of inorganic chemistry, the subject being presented by lectures and recitations with demonstrations in the classroom and application of the principles by each student in the laboratory.

This course concerns itself only with the laws of inorganic chemistry and qualitative analysis, but opportunity for work in quantitative analysis or any other branch of the subject of chemistry is offered in a second year, which is elective. Students in the Agricultural Course are required to do an extra year of work in the chemistry of agricultural products, soils, waters, etc.

In addition to the regular work in chemistry, instruction is also given in this department in Assaying, Mineralogy and Metallurgy.

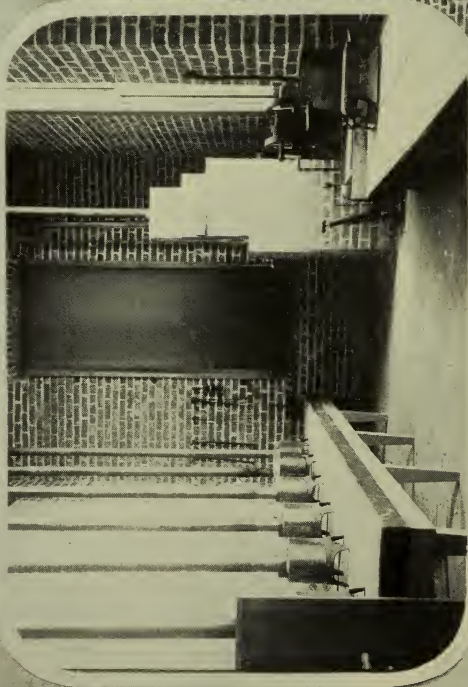
In Assaying, a years' course is offered to those who wish to become practical assayers, instruction being given in both wet and dry methods in common use.



SGIL PHYSICS LABORATORY



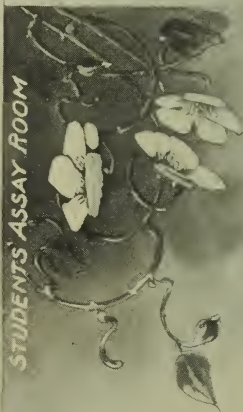
PHYSICAL LABORATORY



STUDENTS' ASSAY ROOM



STATION CHEMICAL LABORATORY.





The instruction in Mineralogy is by the laboratory method with collateral reading; while in Metallurgy, lectures and recitations with occasional visits to smelters in El Paso and vicinity, is the plan followed.

In so far as is at all practicable, all the work is taught by the laboratory method, which this department is especially well fitted to furnish.

A. *Senior Preparatory Chemistry.* The study of the subject as outlined in an elementary text-book, supplemented by frequent experiments performed before the class. The chemistry of this term is intended as a preparation for the different branches of science taught later. *Required of all Senior Preparatory students, third term, 4 hours.*

1. *General Chemistry.* A study of the principles of general inorganic chemistry as outlined in Storer and Lindsay's Manual of Chemistry. The text book work is supplemented by frequent exercises in the laboratory. *Required of all Juniors and Assaying Students, first term, 5 hours. Credit 60 hours.*

2. *General Chemistry.* Continuation of the previous term's work and the subject of qualitative analysis begun. The work is principally in the laboratory. *Required of all Juniors and Assaying Students, second term, 10 hours practice. Credit 60 hours.*

3. *Qualitative Analysis.* The work this term is entirely in the laboratory, being a continuation of the subject of qualitative analysis commenced the previous term. Upon the completion of this term's work students are expected to be able to analyze ordinary compounds. *Required of all Juniors and Assaying Students, third term, 8 hours practice. Credit 48 hours.*

4. *Agricultural Chemistry.* The work consists of a text book study of such subjects as animal nutrition, plant food and fertilizers, as presented in Warrington's Chemistry of the Farm. *Required of Agricultural Seniors, first term, 3 hours. Credit 36 hours.*

5, 6. *Agricultural Chemistry.* Laboratory work in the analysis of agricultural products, waters, soils, etc. *Required of Agricultural Seniors, second and third terms, 6 hours practice. Credit 36 hours.*

7. *Quantitative Analysis.* Laboratory practice in general quantitative analysis. During this term, students receive instruction in the use of the balance and in general quantitative manipulation. Each student is required to make some of the fundamental quantitative determinations, thus becoming familiar with quantitative processes by actual practice. *Elective for all students who have completed Chemistry 1—3, first term, 6 hours practice. Credit 36 hours.*

8. *Advanced Chemistry.* The nature of the work done during this term is left largely to the choice of the student: but, in general, usually consists of laboratory work along some line of original investigation. The work, especially during the latter half of the term, should be along the line leading up to the thesis work to be taken up the next term. *Elective for all students who have completed Chemistry 7, second term, minimum time 6 hours practice. Credit 36 hours for minimum time; more in proportion.*

9. *Thesis.* Students, who elect chemistry for their thesis work, are required to take up some line of original investigation, and prepare a paper on the same. The work is principally in the laboratory, supplemented by a course of outside reading. While but one term is required for thesis work it is much better to select the subject in the second term and devote a considerable portion of that term to the work. *Required of all Seniors who choose a chemical thesis, third term, 10 hours practice as a minimum.*

10, 11, 12. *Graduate Work.* Advanced work in chemistry, leading to the degree of M. S., is offered to graduate students. The character of the work selected is left largely to the choice of the student, subject to the approval of the head of the department. The work taken up, however, must consist largely of original research along some line of chemical investigation. It practically amounts to a continuation of work of the same character as the thesis work of the Senior year, although the subject may be different. *The minimum time requirement for this work as a major is 10 hours practice per week throughout one year.*

13. *Mineralogy.* A laboratory study of the more important minerals, special attention being given to the ores and other minerals of commercial value. The more important rock-making minerals are studied as completely as the time devoted to the subject will permit. Dana's System of Mineralogy and other standard works are used as reference books. *Required of all (except Agricultural) Seniors and Assaying Students, first term, 10 hours practice. Credit 60 hours.*

14. *Metallurgy.* The work is presented in the form of lectures and recitations, using Hiorn's Text-book of Elementary Metallurgy, with a course of supplementary required reading. *Required of all Senior Mechanical Engineers and Assaying Students, second term, 4 hours. Credit 48 hours.*

15. *Assaying, Dry Methods.* For the accommodation of those of our students who desire to elect the subject of assaying, instruction is given in the fire assay of gold, silver, and lead ores. Each student is assigned furnaces, and is supplied with the necessary crucibles, scorifiers, material for making fluxes, etc. Besides other necessary apparatus, he also has the use of balances for weighing out charges, mixing fluxes, and weighing gold and silver beads. *Required of all Assaying Students, and elective for others who have completed Chemistry 1-3, first term, minimum time 6 hours. Credit 72 hours.*

16. *Assaying, Wet Methods.* The study of the quantitative determination of copper, iron, lime, silica, etc., by the best volumetric and gravimetric methods. *Required of all Assaying Students, and elective for others who have completed Chemistry 15, second term, minimum time 6 hours. Credit 72 hours.*

17. *Assaying, Research Work.* The work relates chiefly to the composition and metallurgy of ores. Students are encouraged to make original studies of methods for the extraction of metals from their ores, in order to determine which are most applicable and economical in particular cases. *Required of all Assaying Students, and elective for others who have completed Chemistry 16, third term, minimum time 6 hours. Credit 72 hours.*

The work in assaying is principally in the laboratory, but



is supplemented by a course of reading in standard books on assaying, analytical chemistry, etc.

The time required during the year, of students taking assaying, is six hours or equivalent practice per week. It will usually be possible, however, to arrange for extra work; and students are strongly urged to do so when possible, as the amount of knowledge gained in this subject depends almost entirely upon the time devoted to it in the laboratory.

Students taking assaying are also required to take the regular work in chemistry, geology, mineralogy and metallurgy.

Students will not be admitted to the course in assaying, who have not had sufficient preliminary training to enable them to carry the work.

### Equipment

The chemical department occupies all of the lower floor of the Science Hall, with the exception of one room. The college work and station work have separate quarters. Five good sized rooms, and a smaller store room, are used in the instruction of students, and three rooms and a store room, for the station work. A small brick building, located at a safe distance from the main building, is also used by the department as a store house for gasoline and other combustible and explosive substances.

The rooms set apart for use in the instruction of students are as follows:

1. A large qualitative laboratory for students beginning the study of chemistry. This laboratory is fitted with work desks which are supplied with gas, water, and drain, and have drawers and lockers with combination locks. The qualitative laboratory also contains, among other things, a sink, and a fume closet for work in which noxious gases are present.

2. A quantitative laboratory for the use of advanced students. This laboratory is supplied with two thoroughly equipped work desks, fitted with gas and water pipes, a drain trough through the center, a bottle rack on the top,

and drawers and lockers with combination locks. This laboratory also contains a first class fume closet and a sink.

3. A fire-proof assay laboratory, which contains six gasoline crucible furnaces and two muffle furnaces. This laboratory is also supplied with a Bosworth ore crusher, a sampling plate, a complete set of sieves, crucibles, tongs, cupel moulds, and other accessories necessary in a well equipped laboratory of this character.

4. A weighing room, opening into the quantitative and assay laboratories. This room is fitted with a substantial balance table mounted on brick piers in contact with the ground, thus insuring freedom from floor vibration. This room is supplied with a high grade assay balance, two chemical balances, and a heavier balance for rough weighing. This room is also provided with a large table on which to mix assay charges, etc., and with a case for sample bottles.

5. A lecture room, supplied with a lecture desk, a sink, water, gas, and other accessories.

6. A conveniently located store room for chemicals and general laboratory supplies for students.

The laboratories used for the chemical work have brick walls, and wooden ceilings, fourteen feet high. Each laboratory is supplied with one or more ventilating flues which aid in the removal of fumes and in the ventilation of the rooms. The general equipment of the laboratories has been very materially increased, and is modern and first-class in every particular.

The laboratories fitted up for the accommodation of the Experiment Station work contain, among other things, three work desks supplied with gas, water, and air exhaust pipes for rapid filtration, a commodious hood to carry off noxious gases, apparatus for the determination of nitrogen by the Kjeldahl method, a titration shelf and system of burettes, and a first-class still for the preparation of distilled water. The Station equipment also includes a balance table mounted on brick piers in contact with the ground, a Herzberg and Kulhmann short beam automatic analytical balance, an Ainsworth

No. 1 assay balance, a Springer torsion balance, a Scheibler's polariscope, an imported mill for grinding samples, and several hundred dollars worth of platinum ware.

While the Station laboratory is not designed for the use of students, the work carried on there serves to illustrate actual practical analytical work.

The chemical department also has a collection of mineral specimens for class use, and quite a large department library of reference books and periodicals.

The gas supply for the department is furnished by a 200 light, Matthews gasoline gas machine, which is provided with an automatic mixer whereby the gas is kept uniform in quality.

The water supply for the department is furnished by a deep well on the college grounds, the water of which is of much better quality than most of the well waters of the valley.

*Fees.* For information concerning fees and deposits, required by this department, see the general article on "Fees and Deposits."

## DOMESTIC SCIENCE

PROFESSOR HORNING

MISS FOSTER

This course is especially designed to meet the needs of the young women students by giving them both practical and scientific instruction in things pertaining to the home. The endeavor is so to combine theory and practice that graduates of the department may be materially aided in the administration of the household.

C. B. *Plain Cooking and Sewing.* Practical instruction in simple cookery and plain sewing; mending, darning, and the making of plain garments. *Required of all Senior Preparatory women, first and second terms, 4 hours practice in cooking and 2 hours practice in sewing.*

A. *Cooking, Sewing, and Hygiene.* Practice in cooking and plain sewing continued; lectures and recitations in physiology and hygiene. *Required of all Senior Preparatory women, 2 hours*

*practice each in cooking and sewing, and 1 hour lecture in hygiene.*

1, 2. *Cooking and Sewing.* The study of food principles and the composition of foods is given in conjunction with cooking. Plain sewing continued; the making of undergarments and shirt waists. *Required of Domestic Science Sophomores, second term, 6 hours practice in cooking, 4 hours practice in sewing; third term, 2 hours practice in cooking, 4 hours practice in sewing. Credit 96 hours.*

3. *Canning and Preserving.* Preserving and canning fruit, jelly making, and pickling. *Required of Domestic Science Juniors, first term, 6 hours practice. Credit 36 hours.*

4. *Advanced Cookery.* Advanced work consisting of more complicated cooking. *Required of Domestic Science Juniors, second term, 8 hours practice. Credit 48 hours.*

5. *Invalid Cookery and Serving.* Cooking for the sick with particular application to special diseases. A brief waitress course including lectures and practice in the proper serving of food. *Required of Domestic Science Juniors, third term, 6 hours practice. Credit 36 hours.*

6. *Dietetics.* Arrangement of daily dietary and study of food combinations with special application to disease. *Required of Domestic Science Seniors, first term, 2 hours. Credit 24 hours.*

7. *Dressmaking.* Adapting and using of patterns, fitting and making of dresses. *Required of Domestic Science Seniors, first term, 2 hours practice. Credit 12 hours.*

8. *Home Sanitation.* Lectures on heating, lighting, and ventilation. Reference book, Ellen H. Richards' *Home Sanitation*. *Required of Domestic Science Seniors, second term, 2 hours. Credit 24 hours.*

9. *Dressmaking.* Cutting, fitting, and finishing. *Required of Domestic Science Seniors, second term, 2 hours practice. Credit 12 hours.*

10. *Chemistry of Foods.* Chemistry of some of the commoner foods. Lectures and recitations. *Required of Domestic Science Seniors, third term, 3 hours. Credit 36 hours.*

11. *Chafing-dish Cookery.* Instruction with practice in

the use of the chafing-dish. *Required of Domestic Science Seniors, third term, 2 hours practice. Credit 12 hours.*

12. *Dressmaking.* Practice in dressmaking. *Required of Domestic Science Seniors, third term, 2 hours practice. Credit 12 hours.*

*Equipment.* The kitchen laboratory is provided with individual gas stoves on desks fitted with small closed cupboards containing those cooking utensils, of which the students are in constant need, a convenient sink, a refrigerator, cupboards filled with dishes for serving, and all the utensils and conveniences found in the best equipped kitchens. There is also a large range, food charts, and charts illustrating the cuts of meat. The library contains many books of reference on all phases of the household. The sewing room is provided with all conveniences necessary to the department; four sewing machines, cutting tables, lap boards, sewing chairs, etc.





## ENGLISH

PROFESSOR DAVIS

The instruction in English aims to develop in the student the ability to speak and write good English. As a medium of securing this the course is divided into two parts; namely, Rhetoric and Literature. These two subjects are correlated as much as possible throughout the course.

With our splendidly equipped Library, the highest grade of work can be done in this department. The general library contains about 3,500 volumes, about fifty per cent of which is valuable to the English student for reference work. Beside the general library, a special library equipped with reference to the work planned, is set apart for this department.

The student is required throughout the course to do considerable research work; to hand in at the close of each term, a theme (the subject may be chosen by the student) which must be accompanied by an outline and a list of the works consulted.

The candidate for admission into this department must have a practical knowledge of spelling, capitalization, punctuation, grammatical construction, structure of sentences, and paragraphing.

C, B, A. *American Literature*. This course includes the historical development of American Literature, and a critical study of its masterpieces. Weekly compositions, based upon the reading done in the class, are required.

The work of the first term is devoted to the study of Franklin, Irving, Cooper, Bryant, Halleck, and Drake; the second—to Emerson, Hawthorne, Longfellow, and Whittier; the third—to Poe, Holmes, Thoreau, Lowell, and Parkman. *Required of all Senior Preparatory Students, throughout the year, 4 hours.*

1, 2, 3. *Composition and Rhetoric*. After completing this course, the student should have a thorough and practical knowledge of Composition and of the elementary principles of Rhetoric. In this work special stress is laid upon the form, style, and thought of the written work. Text-



book.—Lockwood & Emerson's Composition and Rhetoric. *Required of all Freshmen, throughout the year, 5 hours. Credit 180 hours.* Professor Hadley.

4, 5, 6. *English Literature.* This work includes the historical development of English Literature, and a critical study of its masterpieces. Special work is give in the study of Chaucer, Spencer, and Shakespeare.

The work of the first term includes the historical development from Beowulf to Francis Bacon; the second, from Bacon to Edmund Burke; special work is given in the study of Bacon, Milton, Pope, Addison, and Burke. The third term is devoted to the study of the Romantic, the Modern, and Victorian Ages, and to the development of the English novel. *Required of all Sophomores, first term, and all those except in the Agricultural course, second and third terms. Credit 60 hours to Agricultural men, 180 hours to others.*

7, 8, 9. *English Literature.* Later 19th century writers in American Literature, and bibliographical methods.

In this work, the first term is devoted to a selected list of poets; the second to essayists; and the third, to novelists and historians. Each student is required to make a bibliography of the several authors as they are studied. Particular attention is given to the use of indexes, current magazines, and reference books. A few sets of cataloguing cards are written to teach the use of the card catalogue. *Required of all Juniors, throughout the year, 1 hour. Credit 36 hours.* Miss Baker.

10, 11, 12. *Advanced Composition.* This work includes a thorough study of the principles of invention. Special attention is given to narration, description, exposition, and argumentation. A large portion of the written work is based upon the reading done in the literature classes. *Required of all Seniors, throughout the year, 2 hours. Credit 72 hours.*

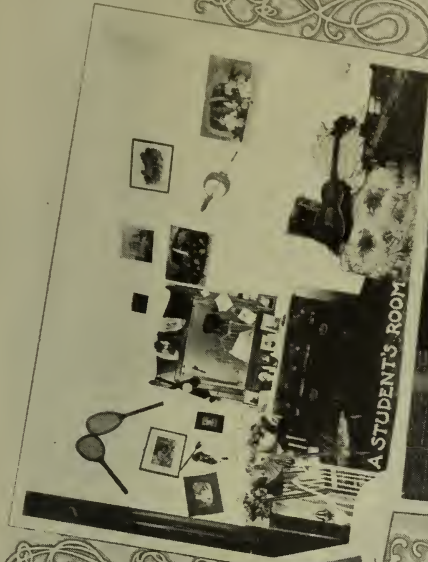
### The Seminary

The Seminary is a literary society composed of all the students in the English department. It affords excellent op-

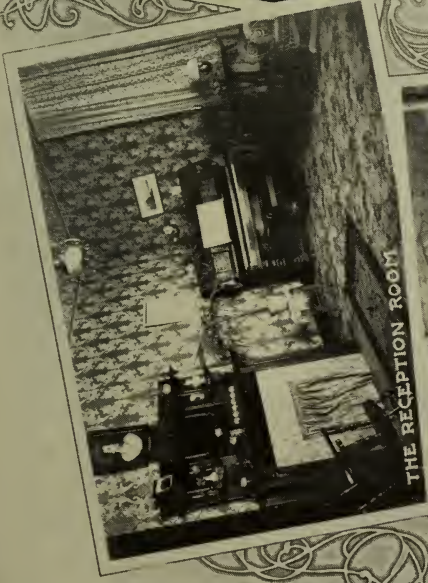
# THE WOMAN'S HALL



ON THE VERANDA



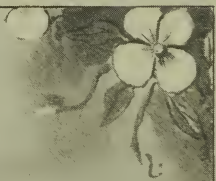
A STUDENT'S ROOM



THE RECEPTION ROOM



THE DINING HALL



LIBRARY



HISTORY



DOMESTIC SCIENCE



opportunities for training in orations, debates, essays, and declamations. The society meets once a month. Each member must take part once during the term, and must perform the part assigned him to the best of his ability. It is directly under the supervision of the head of the department and each participant receives individual instruction both in delivery and composition.

## HISTORY AND PHILOSOPHY

PROFESSOR HADLEY

### History

The ends aimed at in teaching this subject are: (1) to acquaint the student with the most important facts of Ancient, Mediæval, and Modern History; (2) to aid him in interpreting these facts into the prevailing thought of the people at the time of the events; (3) to direct the student's attention to such literature as will assist him in getting a vivid idea of the life of the times of which the history treats.

B. *General History.* Most important points in the history of oriental peoples, and of Greece; the reading of, at least, one prescribed volume relating to this work, and the writing of an acceptable paper on said volume. Leading text book, Myers' General History. *Required of all Senior Preparatory students, first term, 4 hours.*

A. *General History.* History of Rome in outline, and that portion of Mediæval History that carries the student through the "Crusades", and the reading, and abstracting of, at least, one volume. *Required of all Senior Preparatory Students, second term, 4 hours.*

1. *General History.* Beginning at the close of "The Crusades," complete Mediæval History, and study such portions of Modern History as the teacher may select and time will permit; and the reading and abstracting of one prescribed volume. *Required only of students in the General Course, third term, Sophomore year, 5 hours. Credit 60 hours.*

2. *History of Civilization.* Introduction to the more important elements that have influenced existing civilizations, and

explanation of their fusion. A careful study of European Civilization, as outlined by Guizot and supplemented by frequent lectures. *Required of Domestic Science and General Seniors, second term, 5 hours. Credit 60 hours.*

3, 4. *English History.* A study of the history of the English people, with special reference to dominant factors of Anglo-Saxon civilization. *Elective to all students who have completed history Band A or their equivalent, first and second terms, 5 hours. Credit 60 hours per term. Students who elect one term will be expected to take both.*

5. *American History.* Special period of American history. *Elective; third term, 5 hours. Credit 60 hours.*

### Philosophy

1. *Elementary Psychology*, embracing topics equivalent to those found in Halleck's Psychology and Psychic Culture; taught by recitations supplemented by lectures. *Required of Domestic Science and General Seniors, first term, 5 hours. Credit 60 hours.*

2. *Applied Psychology.* In the study and mastery of some branch, or branches, of common school education, the principles of elementary psychology will be constantly applied. This course will be of special benefit to those intending to teach. *Elective to students who have taken Philosophy 1, second term, 5 hours. Credit 60 hours.*

3. *Theory and Practice of Teaching*, embracing the organization and administration of a school:—the rights and duties of boards, teachers, pupils, parents, etc. *Elective to students who have completed philosophy, 1 and 2, third term, 5 hours. Credit 60 hours.*

### Equipment

The department of history is reasonably well equipped. It possesses MacCoun's Ancient and Classical Charts, MacCoun's Mediæval and Modern Charts, Johnston's Imperial Chart of the World, Johnston's Imperial Map of Europe, Appleton's Universal Cyclopedia and Atlas, (12 volumes), Larned's History for Ready Referencæ, (5 volumes), Ridpath's

History of the World, (4 volumes). and other works.

Those who pursue the courses in philosophy will have the opportunity of observing the methods practiced in the preparatory school.

The department offers rather extended courses in history, theoretical and applied psychology to those students of the General and Domestic Science courses who may choose to elect its work. To prospective teachers the work in psychology is of particular importance.

## MATHEMATICS AND ASTRONOMY

PROFESSOR HAGERTY

### Mathematics

C, B, A. *Algebra*. General review from the beginning of algebra to evolution: theory of exponents, radicals, quadratic equations, ratio, proportion, variation, progressions, imaginary quantities, inequalities, variables and limits, the binomial theorem (positive integral exponents), and logarithms. Text-book Milne's Academic Algebra. *Required of all Senior Preparatory students, throughout the year, 5 hours.*

1, 2. *Plane Geometry*. Nearly one-third of the time is given to original exercises. Text book Wentworth's Plane and Solid Geometry. *Required of all Freshmen, first and second terms, 5 hours. Credit 120 hours.*

3. *Solid Geometry*. In order to add interest to the study of this subject and to fix in the mind the propositions demonstrated, many numerical exercises are given. *Required of all Freshmen, third term, 5 hours. Credit 60 hours.*

4. *Plane Trigonometry*. Some practical problems are given requiring students to use a surveyor's transit for measuring both horizontal and vertical angles. This course includes an introduction to spherical trigonometry. *Required of all Sophomores, first term, 5 hours. Credit 60 hours.*

5. *Higher Algebra*. Indeterminate equations, undetermined coefficients, binomial theorem (any exponent), permutations and combinations, series, and theory of equations. *Required of Sophomore Mechanical Engineers, elective for all other*



*students who have completed Mathematics 4, third term, 5 hours. Credit 60 hours.*

6. *Analytic Geometry.* Loci and their equations, straight line and circle, transformation of co-ordinates, parabola, ellipse, hyperbola, general equation of the second degree, discussion of a few of the higher plane curves, and an introduction to geometry of three dimensions. *Required of Junior Mechanical Engineers, elective for all other students who have completed Mathematics 5, first term, 5 hours. Credit 60 hours.*

7, 8. *Differential and Integral Calculus.* The topics treated are those usually taken up in accordance with well-established usage; and many practical problems from mechanics are solved by the student in order to maintain his interest, and to fix in his mind the principles which have been explained. Taylor's Calculus is the text book used. *Required of Junior Mechanical Engineers, elective for all other students who have completed Mathematics 6, second and third terms, 5 hours. Credit 120 hours.*

### Astronomy

1. *General Astronomy.* Not only astronomical facts and principles will be studied, but also the methods by which these facts have been ascertained. Night observations constitute an important part of the course. The text-book used is Young's General Astronomy. *Required of General and Domestic Science Juniors, elective for all other students who have completed Mathematics 4 and Physics 1, 2, and 3, 5 hours and 2 hours practice. Credit 72 hours.*

2, 3. *General Astronomy.* Continuation of Astronomy 1, about half the time being devoted to night observations. *Required of General and Domestic Science Juniors, elective for all other students who have completed Astronomy 1, second and third terms, 2 hours or equivalent in practice. Credit 48 hours.*

### Surveying

1, 2. The instruction in this subject will be such as to render the students familiar with the principal instruments and methods used in plane and topographical surveying. Levels

will be run, surveys made, notes plotted and areas computed. Students will have practice in determining the true meridian and latitude, by observations of the north star and of the sun. *Required of all (except Domestic Science) Sophomores, second term, 1 hour and 8 hours practice. Credit 60 hours.*

### Equipment

This department has a portable equatorial telescope with  $4\frac{1}{2}$  inch objective and magnifying powers ranging from 50 to 400; planetarium, star lantern with slides, star atlases, planisphere, 24 inch slated globe, trigonometer, Kennedy's dissected geometrical blocks; a surveyor's compass, two transits, one of which has a gradienter and solar attachment, engineer's level, plane table, protractors, aneroid barometer, optical square, planimeter, pantograph, chains, tapes, leveling rods, poles, pins, etc.

The department library contains many valuable books of reference, and several periodicals.

## MECHANICAL ENGINEERING

PROFESSOR MILLS

ASSISTANT PROFESSOR SAGE

MR. MACGREGOR



Instruction in this course is given by lectures, recitations, and practice, so combined as to constitute a symmetrical course of study. The endeavor is to provide the student with a broad foundation of general and theoretical knowledge, together with a liberal amount of practice in the line of his chosen profession.

Much time is necessarily devoted to higher mathematics and to technical subjects; yet certain fundamental studies, necessary to a broad and liberal education, such as physics, chemistry, languages, literature, political economy, and history are provided for.

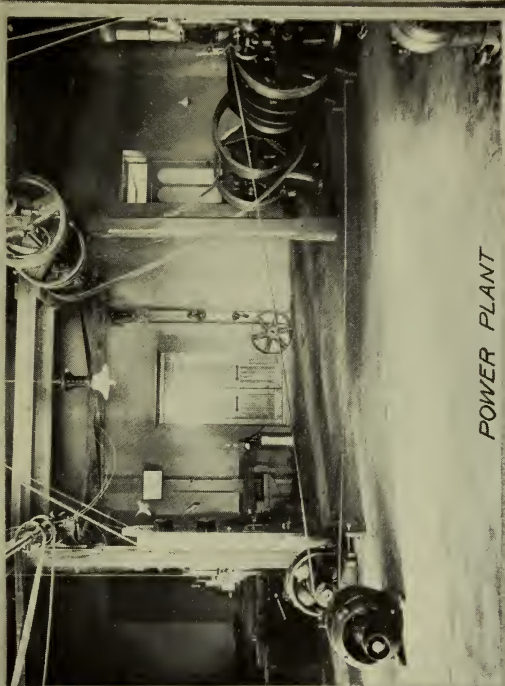
The student is given a thorough training in the theoretical branches underlying the science of machines, together with a clear understanding of the practical construction of mechanical devices.

Shop practice offers practical illustrations of the precepts taught in the class room, and is a most essential part of the Mechanical Engineering Course.

No attempt is made to teach trades, but the course in shop practice will furnish such training as will insure marked advancement subsequent to graduation.

The practice is supplemented by lectures on the care and use of the various tools, machines, and materials used in the mechanical engineering profession.

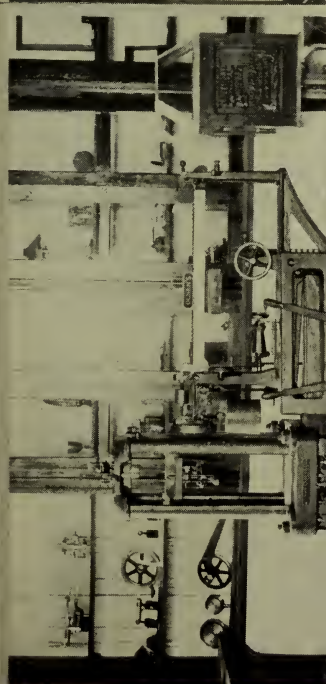
B, A. *Free-Hand Drawing.* Outline drawing from blackboard, systematic drill in the execution of curves and



POWER PLANT



MECHANICAL LABORATORY







WOOD SHOP



FORGE SHOP



FREEHAND DRAWING CLASS

scrolls, principles of perspective as applied in the drawing of simple type forms, shop models, etc., relative proportion and the study of the values of light and shade are developed in the execution of drawings of buildings, corners of rooms, etc., lettering and conventional ornament is taken up. The advanced work is given with particular reference to the course pursued by the student. *Required of all Senior Preparatory students and Practical Mechanics men, first and second terms, 2 hours practice.*

1, 2, 3. *Mechanical Drawing.* Instruction in the use and care of drafting instruments, exercises in geometrical construction, lettering, plane projections, shading and coloring; followed by detail and assembled working drawings of machinery with tracings and blue prints therefrom. *Required of Mechanical Engineers, Freshmen, second and third term, Sophomores, second term, 4 hours practice. Credit 72 hours.*

4, 5, 6. *Machine Design.* Mechanical Drawing is merged into Machine Design, of which it forms an important part, and affords constant opportunity for further practice in making drawings of standard types of machinery. The work in this subject consists chiefly in the design of the elements of machines, such as bolts, rivets and riveted joints, journals and bearings, pulleys, gears, etc. *Required of Mechanical Engineers, Sophomores, third term, Juniors, first term, Seniors, first term, 4 hours practice. Credit 72 hours.*

7. *Descriptive Geometry.* In this subject the principles of orthographic projection, development of lines and surfaces, etc., are fully discussed in the class room; and a great variety of problems, illustrating both general and special cases are solved and constructed in the drafting room. *Required of Sophomore Mechanical Engineers, second term, 5 hours. Credit 60 hours.*

8. *Elementary Mechanics.* In this subject, the general laws of statics and dynamics are studied with reference to solids, liquids, and gases; and the fundamental principles are applied to the solution of a wide range of problems. *Required of Junior Mechanical Engineers, first term, 4 hours. Credit 48 hours.*



9. *Mechanism.* Under this head are studied the principles underlying the action of the elementary combinations of which all machines are composed; the communication of motion by gear-wheels, belts, cams, screws, linkwork, etc. *Required of Junior Mechanical Engineers, second term, 4 hours. Credit 48 hours.*

10. *Strength of Materials.* This subject embraces a study of the characteristics, methods of manufacture, and useful properties of the various materials of construction; and a mathematical investigation of their strength, elasticity and other physical properties. *Required of Junior Mechanical Engineers, second term, 5 hours. Credit 60 hours.*

11. *Engineering Structures.* This subject embraces a study of the design and construction of foundations and superstructures, the selection of materials, superintendence, specifications, etc. *Required of Junior Mechanical Engineers, third term, 5 hours. Credit 60 hours.*

12. *Steam Boilers.* Under this head the principles underlying the construction of the various forms of steam boilers are studied. Attention is given to the various details in their design and operation, such as the size of flues, thickness of plates, styles of riveting, bracing, the amount of grate and heating surfaces, etc.; also the various attachments. *Required of Junior Mechanical Engineers, third term, 5 hours. Credit 60 hours.*

13. *Steam Engine.* The student makes a study of the general principles of the steam engine and of the various types in common use, and investigates the many problems relating to their structure and efficiency. *Required of Senior Mechanical Engineers, first term, 4 hours. Credit 48 hours.*

14. *Hydraulics* includes the study and application of the principles of the subject to the various problems involved; such as the flow of water through orifices, short and long tubes, conduits, and in open channels; gauging streams, measurements of water power, etc. *Required of Senior Mechanical Engineers, second term, 5 hours. Credit 60 hours.*

15. *Engine and Boiler Tests.* In this subject the student

makes a study of the principles and the methods involved in determining the efficiency of engines and boilers and applies the same in the engineering laboratory. *Required of Senior Mechanical Engineers, second term, 4 hours practice. Credit 24 hours.*

16. *Analytical Mechanics* embraces a study of the laws of equilibrium, motion, work and energy, as applied to particles and rigid bodies; also a study of the center of gravity and the moment of inertia. *Required of Senior Mechanical Engineers, third term, 5 hours. Credit 60 hours.*

17. *In Electrical Engineering* the student is drilled in the fundamental principles of electric power generation and the application of electricity to lighting, street railway, and mining work. *Required of Senior Mechanical Engineers, third term, 5 hours. Credit 60 hours.*

18. *Roofs and Bridges.* In roofs, bridges, and arches the student will be given a drill in determining stress by both the graphical and analytical methods, and in making drawings of the details of construction. *Required of Senior Mechanical Engineers, third term, 4 hours practice. Credit 24 hours.*

D, C. *Carpentry.* Reading drawings, sawing, planing, gauging, chiseling, boring, mortising, dovetailing, fitting and joinery. *Required of all male Senior Preparatory students, first and second terms, 6 hours practice.*



27. *Wood Turning.* Exercise in turning between centers, face-plate and chuck work, ornamental turning, finishing and polishing. *Required of Freshman Mechanical Engineers and Practical Mechanics men, first term, 6 hours practice. Credit 36 hours.*

19, 20. *Forging.* Care of fire, heating, drawing out, bending, upsetting, swaging, welding, tempering, annealing, tool making and dressing, ornamental iron work. *Required of*

*Freshman Mechanical Engineers and Practical Mechanics men, first and second terms, 4 and 6 hours practice respectively. Credit 60 hours.*

21. *Advanced Carpentry.* Glue joints, panel work, tables, bookcases, etc. Timber framing, the construction of miniature buildings will be carried far enough to show the best methods of framing, "laying out," and cutting, hip, valley, or jack rafters. *Required of Freshmen Mechanical Engineers and Practical Mechanics men, third term, 6 hours practice. Credit 36 hours.*

22. *Pattern Making.* Patterns and core boxes for the molding of simple machine parts. *Required of Sophomore Mechanical Engineers, first term, 10 hours practice. Credit 60 hours.*

23. *Foundry Practice.* Mixing and tempering molding and core sands; molding in green and dry sand, skin drying, making and drying cores. *Required of Sophomore Mechanical Engineers, third term, 6 hours practice. Credit 36 hours.*

24. *Bench Work in Iron.* Laying out work, chipping, filing, fitting, scraping, polishing, key-seating, drilling and tapping, hand work with machine tools. *Required of Junior Mechanical Engineers, first term, 6 hours practice. Credit 36 hours.*

25, 26. *Machine Work.* Elementary machine-tool work with drill-press, planer, and lathe; production of finished machine elements. *Required of Senior Mechanical Engineers, first and second terms, 4 and 6 hours practice, respectively. Credit 60 hours.*

### Equipment

The department has two commodious buildings devoted to its work. One has rooms for a forge shop, foundry, and storage; the other contains two recitation rooms and a hall, an engine and boiler room and rooms for wood work and machine work.

An excellent departmental library containing standard works pertaining to the engineering professions is accessible to students.

## MECHANICAL AND ELECTRICAL LABORATORY

The power equipment of the College consisting of the following engines, boilers, etc., affords opportunity for investigation, by the students, on the subject of steam and steam engine practice:—one 40 horse power tubular boiler, one 50 horse power Hoppes feed water heater and purifier, one duplex steam pump, one 30 horse power Weston automatic engine, one 8 horse power Shipman engine, one 13 horse power Priestman oil engine, one air pump and reservoir. The equipment also includes indicators for steam and oil engine testing, one standard steam gauge tester, two planimeters, a gas meter, one tachometer, one Olsen testing machine of 60,000 lbs. capacity for tension, compression, and transverse tests. A current meter, hook gauge, and other instruments are available for work in hydraulics.

One 12 horse power 250 volt dynamo, one 8 horse power motor with switch board instruments, one Weston portable ammeter, one Weston portable volt meter.

The Machine Shop has one 16-inch x 6 foot tool room lathe with compound rest and taper attachment, one 14-inch x 8 foot standard engine lathe, one 24-inch x 24-inch x 6 foot planer, one 22-inch power drill press, one sensitive drill, one gas pipe threading and cutting off machine, one improved double wheel emery grinder; also a large number and good assortment of drills, chucks, small tools, and machine attachments.

The Wood-working Shop contains fourteen benches, six 10-inch lathes, one 18-inch x 10 foot lathe, with over-hanging face-plate capable of turning work up to 80 inches in diameter, one combination rip and cross cut circular saw, one Fox trimmer, one large grind stone with Brown and Sharp frame, and a good supply of small tools and appliances.

In the forge shop are eight forges of the latest down draft model with improved underground arrangements for the blast and exhaust pipes, one forge being equipped with a hand blower.

Each forge is fitted with a full set of hammers, tongs,

swages, fuller, etc. An 18-inch hand power drill press and a punching and shearing machine form a part of this equipment.

The foundry has a brass furnace, the usual small tools, and a number of flasks for moulding.

### **A Two Years' Course in Practical Mechanics**



The course is established for the benefit of those wishing to specialize in Manual Training operations or who have not the time to take the regular college course requiring from four to six years.

It is not the intention to teach trades in this course, but the advantages of the shops are offered free to young men who can not enter regularly in the college classes. Since instruction, rather than money making is the object, it can readily be seen that the

work under skilled instructors has many advantages over the ordinary trade apprenticeship.

While there are no educational requirements for admission to this course, the student must be at least sixteen years of age, and show his fitness for the work. The shop practice work of the first year will be the same as that prescribed for Freshmen in the Mechanical Engineering course. During the second year the student will be allowed to specialize in either wood or iron work and the drawing pertaining thereto. He will also be required to take enough academic work throughout the course to make a minimum of sixteen hours per week.



**Two Years' Course in Practical Mechanics**

**FIRST YEAR**

FIRST TERM	SECOND TERM	THIRD TERM
Free Hand Drawing, 2 P English, 2-4 or 5 Mathematics, 4 or 5 Elective, 4 to 8 Woodturning & Forging, 10 P	Free Hand Drawing, 2 P Geometrical Drawing, 4 P Forging, 6 P English, 2-4 or 5 Mathematics, 4 or 5 Elective, 4 to 8	Free Hand Drawing, 2 P Mechanical Drawing, 4 P Carpentry, 6 P English, 2-4 or 5 Mathematics, 4 or 5 Elective, 4 to 8

**SECOND YEAR**

FIRST TERM	SECOND TERM	THIRD TERM
One of: Carpentry, 6 P Bench Work in Iron, 6 P Pattern Making, 6 P Machine Work, 6 P Foundry Practice, 6 P Drawing, 4 P English, 2-4 or 5 Elective, 5 to 9 Bookkeeping, 5	One of: Carpentry, 6 P Forging, 6 P Pattern Making, 6 P Foundry Practice, 6 P Drawing, 4 P English, 2-4 or 5 Testing Materials, 4 P Mathematics, 4 or 5 Elective, 3 to 8	One of: Carpentry, 6 P Forging, 6 P Pattern Making, 6 P Foundry Practice, 6 P Machine Work, 6 P Drawing, 4 P English, 2-4 or 5 Mathematics, 4 or 5 Elective, 5 to 9

**POLITICAL ECONOMY**

**PRESIDENT FOSTER**

1. In this subject, the student is made acquainted with the laws of production, the principles of money, foreign trade, tariff and taxation, the influences which affect exchange, the various theories of distribution and consumption, and the history of economic development. *Required of all Juniors (except Mechanical Engineers), second term, 4 hours. Credit 48 hours.*

**SPANISH AND LATIN**

**Spanish**

The proximity of this College to the Republic of Mexico, the fact that the majority of inhabitants of the Territory are Spanish speaking, and that Spanish is the native tongue of a large number of the pupils of the College, all combine to furnish an opportunity for study and proficiency in the Spanish language, of the most practical kind.

The acquisition of a thoroughly practical working knowl-



edge of Spanish is aimed at, and to this end as soon as a sufficient vocabulary is acquired, class conversation is begun and continued throughout the whole course. The student is strongly urged to join the Liceo Cervantes, a literary society, the proceedings and exercises of which are carried on exclusively in Spanish. A number students have derived great benefit by getting roommates who speak Spanish, and thus availing themselves of constant exercise in that language.

1, 2, 3. De Tornos's Combined Spanish Method, and Woman's Readers after the natural or Pestalozzian method are the texts used, with various authors as sight and parallel readings. *Required of all students who do not elect Latin, throughout the year, 5 hours. Credit 180 hours.*

4, 5, 6. De Tornos's Combined Method, Matzke's Reader, Bancroft's and the Eclectic readers are used in class work. Cartillas científicas, dramas and novels are required as outside readings. Knapp's and Garner's grammars, Traub's Verb, are used as references. *Required of all students who do not elect Latin, except those of the Agricultural course, throughout the year, 5 hours. Credit 180 hours.*

7, 8, 9. This year is designed as a preparation for the commercial use of Spanish, and consists of correspondence, conversation, sight reading, spelling, dictation, translation and discrimination of terms in both languages. *Required of students in Spanish stenography and elective for all other students, throughout the year, five hours. Credit 180 hours.*

### Equipment

The equipment of the department in reference books, dictionaries, technical and general, manuals of correspondence and business forms, is quite complete, and much general reading matter in Spanish is found in the library.

Acceptable theses have been prepared in this department, upon various subjects. Last year a "Manual de Correspondencia" was gotten out, and this year "Zaraguéta" has been translated as a thesis.

### Latin

The course in Latin extends through three years, the same work being accomplished as is usually done in courses of like duration. The Roman pronunciation is followed.

Latin and Spanish are optional with each other, all students being required to elect either the one or the other, except mechanical engineering students who will not have time for more than one year. A second year's work is elective with agricultural students.

1, 2, 3. Collar and Daniell's First Latin Book; supplementary reading. *Required of those students who do not elect Spanish, throughout the year, 5 hours. Credit 180 hours.* Professor Davis.

4, 5, 6. Cæsar, Gallic War, Books I-IV; Viri Romæ; Jones' Prose Composition; supplementary reading. *Required of those who do not elect Spanish, except for Agricultural and Mechanical Engineering men, throughout the year, 5 hours. Credit 180 hours.* Professor Davis.

7, 8, 9. Cicero, Select Orations and Letters; Virgil; Metre; Jones' Prose Composition; History of the Period; Classical Geography. *Elective to all students in college. Five hours per week throughout the year. Credit 180 hours.*



## BOOKKEEPING

A course, of five hours for one year, treating of bookkeeping, business forms, and theory of accounts is now furnished by the institution. This course, while of necessity limited in extent, is thorough in the work covered, and an attempt is made to furnish instruction in those branches which will prove of the widest benefit to the student in after life. Students who are not properly prepared will not be admitted to this work.

1. *Bookkeeping.* Double entry bookkeeping, spelling, and penmanship. *Required of all Seniors and second year men in the short courses in Agriculture and Mechanical Engineering, first term, 5 hours. Credit 60 hours.*

2, 3. *Business Forms, etc.* Business forms, commercial arithmetic, penmanship, elementary commercial law, and allied subjects are studied. *Elective for all who have completed Bookkeeping 1, second and third terms, 5 hours. Credits 60 hours per term.*

## MUSIC

Arrangements looking toward a good musical department are now being made, and it is expected that with the beginning of a new year the institution will be able to offer good facilities for students in this work. The department is of necessity self supporting, and students receiving instruction in music will be charged for lessons at the usual price for such instruction.


This department is supplied with three pianos and no charges are made for the use of these instruments for practice. Efforts are being made to arrange for chorus work, to occur once or twice each week, to which students may be admitted free of charge.

## STENOGRAPHY AND TYPEWRITING

MR. LESTER, PRINCIPAL.

PROFESSOR DAVIS,

MR. MILLER.



To meet the demand for instruction in stenography and typewriting, the above department is maintained in the College. To avoid interference with the regular college work, the work of this department is kept distinct, with certain requirements, and a definite course of study.

*Requirements for Admission.*—For entrance to the course in English Stenography, students must be at least sixteen years of age. The average age of the enrollment in this department, however, is usually much higher than this. For last year, the average was  $22\frac{1}{2}$  years. Graduates of any commissioned high school in the Territory will be admitted without examination. All other applicants must show that they possess the required ability in English to enter the Freshman English class of the regular college course. See page 47.

No guarantee is given to any student pursuing these courses that he will secure a position upon completion thereof. There is, however, little doubt that any student satisfactorily completing a required course will be able to take a position, and no competent graduate of the department has yet failed to do so.

*Equipment.*—The department is equipped with twelve typewriters, Remington and Smith Premier machines and an Oliver. There are also the necessary appliances for the required work under office practice.

It is important that students enter this department promptly at the beginning of the courses. It is seldom that

one who enters late is able to complete the required work satisfactorily. No provision can be made for commencing the work of a course at any other time than as provided. The course of study in English Stenography is as follows:

### A Course in English Stenography

FIRST TERM	SECOND TERM	THIRD TERM
Stenography 1, 10 hours Typewriting 1, 5 hours English 1, 5 hours	Stenography 2, 10 hours Typewriting 2, 5 hours English 2, 5 hours	Stenography 3, 10 hours Typewriting 3, 5 hours Office Practice, 5 hours

*Stenography.*—Stenography 1, in the first term of this course, is elementary in character, being a thorough study of the principles of shorthand. Stenography 2, in the second term, covers word signs and outline drill; and, in the third term, Stenography 3 consists of advanced grade work, introducing a good deal of business and other dictation.

Text-books: Graham's Standard Phonography, revised edition; Graham's First and Second Readers and Amanuensis Practice.

*Typewriting.*—This work covers fingering, touch, copying, letter-writing, legal and commercial forms, typewriting from dictation, mechanism and care of the machine, speed exercises, and transcription from shorthand notes. The four finger touch method is used, with blank key-board. Work absolutely free from errors is required. Opportunity is afforded students for work on both single and double key-board machines.

Text book: Barnes' Complete Typewriting Instructor.

*Office Practice.*—This work, occurring in the third term, covers letter writing, indexing and filing, proof-reading, duplicating and manifoldng. A small charge is made for material used.

### English-Spanish Stenography

The experience of past years has shown conclusively that a strong and growing demand exists for competent English-Spanish stenographers. The conditions existing in this locality and institution are so favorable for work in English-



Spanish stenography that they may be said to be almost unique. The calls upon this College for such stenographers during the past few years have far exceeded the supply; although these calls come principally from Mexico, there is an increasing demand in the United States and the newly acquired Spanish-speaking possessions, and it is believed that the business opportunities open to competent English-Spanish stenographers are most desirable.

For admission to this course students must show that they are prepared to complete the course within one year. To do this, some previous knowledge of both English shorthand and the Spanish language is desirable and usually necessary. The course in Spanish stenography is as follows ;

#### A Course in Spanish Stenography

FIRST TERM	SECOND TERM	THIRD TERM
English 1, 5 hours Special Work, 5 hours Adv. Stenography 4, 1 hour Spanish 7, 5 hours Typewriting 4, 5 hours	English 2, 5 hours Spanish Stenog, 7, 5 hours Adv. Stenography 5, 1 hour Spanish 8, 5 hours Typewriting 5, 5 hours	English 3, 5 hours Spanish Stenog, 8, 5 hours Adv. Stenography 6, 1 hour Spanish 9, 5 hours Typewriting 6, 5 hours

*Stenography.*—Stenography 4, 5 and 6 in this course is advanced work in English stenography, and consists of rapid dictation and business forms. Stenography 7 and 8 is the work in Spanish stenography, during which the principles of the text book used are first gone over, followed by work in Spanish dictation.

*Text-book:* Lester & Barker's English-Spanish Phonography.

*Special Work.*—Under this head provision is made for special work in commercial English, to thoroughly train Spanish-speaking students; or for special work in Spanish, in the Freshman or Sophomore classes, for those whose knowledge of that language is not sufficient.

*Typewriting.*—Typewriting 4, 5 and 6 is principally English and Spanish transcription work, with such advanced work as the time allotted will permit.



## THE PREPARATORY SCHOOL

PROFESSOR RICHARDS, PRINCIPAL

MISS COMBS

MISS BLAKESLEY

MISS SHIMER

This department has been planned primarily for young men and women who desire to prepare themselves for some of the regular courses of the college proper. Owing to the vast extent of the Territory and its scattered population, it has been almost impossible to secure good school privileges for every settlement, or even for some of the larger towns. This department, through its special and regular classes, enables pupils to supplement the deficiencies of their home schools, or to secure more complete and thorough instruction in the branches commonly taught in the grammar and high schools.

Besides its regular classes, there is a special class designed to meet the needs of those persons of somewhat mature age who, through lack of early opportunities, are not prepared to enter the regular collegiate or preparatory classes; but whose maturity of mind enables them to make more rapid progress than can be made in the regular preparatory classes; and of those Spanish-speaking students (still a large element in our population) whose educational qualifications would admit them to a regular class if their command of English were greater. The course of study for this class cannot be definitely outlined. Each pupil, however, will be prepared as quickly as possible to enter a regular class.

### Requirements for Admission

For admission to the special class candidates must be at least sixteen years of age or must possess all the requirements for admission to a regular class, except a sufficient knowledge of the English language.

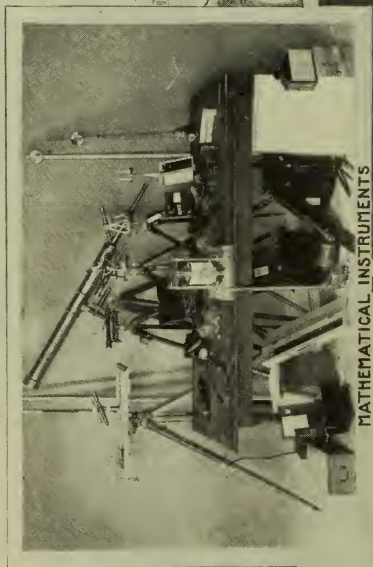
For admission to the lowest regular (C) class of the preparatory department candidates must give satisfactory evidence



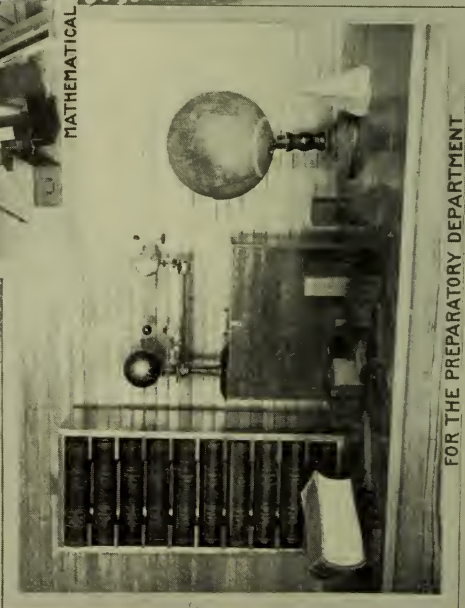
CLASS PICNIC



# DEPARTMENT of STENOGRAPHY & TYPEWRITING.



MATHEMATICAL INSTRUMENTS



FOR THE PREPARATORY DEPARTMENT



RELIEF MAPS



of having completed the work of the Fifth Grade as outlined in the Course of Study for the Public Schools of New Mexico and authorized by the Territorial Board of Education. This work is as follows:

1. Arithmetic.—An equivalent of the work covered by White's Complete Arithmetic to Common Fractions (p. 47).
2. Language.—An equivalent of the first half of Reed and Kellogg's Graded Lessons in English.
3. Geography.—Complete the study of the United States in Barnes' Complete Geography, or its equivalent.
4. Reading.—An equivalent of the work covered by McGuffey's Fourth Reader.
5. Spelling and Writing.—An elementary knowledge of these subjects.

For entrance to the higher classes candidates must give satisfactory evidence of having completed the work of grades below the class they seek to enter.

Strict adherence to these requirements will be enforced.

Instruction in free-hand drawing will be provided for all pupils. Some informal work will be done, also, in vocal music.

The aim of the department is to develop courteous manners and studious habits in the pupils. While strict discipline will be maintained, the students, as far as possible, are placed on their honor and self-government is encouraged. This, we believe, will tend to develop those qualities necessary to good citizenship.

## COURSE OF STUDY OF THE PREPARATORY SCHOOL

### Junior Preparatory Class

#### FIRST HALF YEAR

- ✓ Algebra *Milnes*
- ✓ Grammar and Composition
- ✓ Arithmetic *Whites*
- ✓ Civics *McCleary*
- Physical Geography
- ✓ Freehand Drawing

#### SECOND HALF YEAR

- ✓ Algebra *Milnes elements*
- ✓ Grammar and Composition *Reed & Kellogg's higher lessons*
- ✓ Arithmetic *Whites*
- ✓ Physics
- ✓ Physiology *Hutchinson*
- ✓ Freehand Drawing

*Murray*

## Elementary Division

## A CLASS

- ✓ Arithmetic *Whites*
- ✓ Grammar and Composition
- ✓ United States History *Barnes*
- ✓ Reading
- ✓ Spelling
- ✓ Writing
- Freehand Drawing

## B CLASS

- ✓ Arithmetic *Whites*
- ✓ Grammar and Composition *Reed*
- ✓ Geography *Mannys advanced*
- ✓ Reading
- ✓ Spelling
- ✓ Writing
- Freehand Drawing

## C CLASS

- ✓ Arithmetic *Whites*
- ✓ Grammar *Reed's graded lessons*
- ✓ Geography *Mannys elementary*
- ✓ Reading
- ✓ Spelling *Reed's word lessons*
- ✓ Writing
- Freehand Drawing

## SPECIAL CLASS

The course of study for this class can not be definitely outlined, but the work will be such as to prepare students for a regular class as quickly as possible.



*Reed & Kelley go higher lesson*

## MATERIAL EQUIPMENT

### The Main Building or College Hall

2049 The main building is a brick structure of two stories with stone basement surrounded by a cement area. It is trimmed with a gray stone and has a heavy rough stone foundation. It is well built and cost \$25,000. It contains thirteen rooms, all of which are furnished and in constant use. The building is well supplied with gas, water, and is lighted by electricity. On the first floor are the library and the president's and the registrar's offices, as well as a number of recitation rooms. On the second floor, besides several class rooms, is McFie hall, which is used for class exercises, lectures, and similar purposes, and will seat a large audience.

### The Library

MISS BAKER

The college library comprises 6,000 books, 5,000 pamphlets and 1,000 public documents. In addition to these it subscribes to 83 magazines and several dailies, and receives numerous magazines and papers as gifts. This collection is grouped into general, department, and text-book libraries.

### General Library

The general library is located in a well lighted and commodious room in the main building, as it is the aim of the institution to make it an attractive place for study and quiet reading. It is open from 8:15 a. m. to 5:00 p. m. on all college working days, and until noon on other days excepting Sundays and legal holidays.

This main library has in the neighborhood of 3,000 volumes for general use and about 500 volumes for reference work. The reference section consists of the best dictionaries, encyclopedias, etc., besides the files of magazines with the standard indexes. In addition to the customary reference books, files of the bulletins of the Agricultural stations throughout the United States are also accessible.

The books are classified by the Dewey system and are arranged on open shelves. They are further sub-divided into



adult and juvenile. This personal access to the books is of especial benefit to our Spanish-speaking students, as it gives them an opportunity to look books over before taking them home. The catalogue is the usual dictionary catalogue of authors, subjects, and titles arranged in one alphabet.

Subject to certain lenient restrictions, books may be drawn by any member of the college. Students are required to make a guarantee deposit with the registrar of \$2.50 preliminary to drawing either library or free text-books. This amount is refunded at the end of the year on presenting to the registrar an order properly endorsed by the librarian. The rules governing the library may be found on page 86.

A limited number of students desiring to help themselves may work out their fees in the library at the rate of ten cents per hour. Such students will be required to give a few additional hours in order to learn the duties assigned them.

### Department Libraries

Each department has its own individual library which is open during the working hours of the department. Books may be drawn from these libraries by consulting the heads of the departments concerned.

### Free Text-Book Library

Text-books are furnished to all students after they have made a deposit of \$2.50 with the registrar. These books are drawn out upon written orders from the several instructors. Students are charged for unreasonable damage to all books while in their possession.

The following periodicals are either in the library or in the offices of the special departments :

- |                               |                                |
|-------------------------------|--------------------------------|
| *Agricultural Advertising     | American Journal of Psychology |
| *Agricultural Epitomist       | American Machinist             |
| American Agriculturist        | American Naturalist            |
| American Amateur Photographer | *American Poultry Journal      |
| American Blacksmith           | *American Sheep Breeder        |
| American Chemical Journal     | Analyst, London                |
| American Cultivator           | Architects' Builders' Magazine |
| *American Florist             | Atlantic                       |
| *American Grange Bulletin     | *Beet Sugar Gazette            |

- Birds
- Book-Keeper
- Bookman
- Botanical Gazette
- Breeders' Gazette
- Bulletin Torrey Botanical Club
- Business
- \*California Cultivator
- Cassier's
- Catholic World
- Century
- Chemical News
- Correct English
- Cosmopolitan
- Cumulative Index to Periodicals
- Current History
- \*Dairy, The
- \*Dairy and Produce Review
- \*Dairy World
- Educational Review
- Electrical World and Engineer
- Engineer
- Engineering and Mining Journal
- Engineering News
- \*Farm and Fireside
- \*Farm and Ranch
- \*Farm Poultry
- \*Farm Stock and Home
- \*Farmers' Call
- \*Farmers' Guide
- \*Farmers' Review
- \*Farmers' Voice
- Field and Farm
- Forestry and Irrigation
- Forum
- Foundry
- Gardening
- Harper's Bazar
- Harper's Monthly Magazine
- Harper's Weekly
- \*Holstein Friesian
- \*Hoar's Dairyman
- \*Homes
- \*Homestead
- Irrigation Age
- \*Journal of Agriculture
- Journal American Chemical Society
- Journal Association Engineering Societies
- Journal London Chemical Society
- Journal of Education
- Journal of Pedagogy
- \*Kansas Farmer
- Keith's Magazine
- Ladies' Home Journal
- Library Journal
- Life
- Literary News
- \*Live Stock Report
- \*Louisiana Planter
- Masters in Art
- Mathematical Gazette
- McClure's Magazine
- Mining & Scientific Press
- \*Mirror and Farmer
- Monthly Cumulative Book Index
- \*Nebraska Farmer
- North American Review
- \*Ohio Farmer
- Orange Judd Farmer
- \*Oregon Agriculturist
- Our Times
- Out West
- Outlook
- \*Pacific Fruit World
- Pacific Rural Press
- Phonographic Magazine
- Pittonia
- Popular Astronomy
- Popular Science Monthly
- Power
- Practical Engineering
- \*Practical Farmer
- \*Prairie Farmer
- Public Opinion
- Publishers' Weekly
- Review of Reviews
- Rural New Yorker
- Saturday Evening Post
- \*School Bulletin
- Science
- Scientific American and Supplement
- Scribner's Magazine
- \*Southern Farm Magazine
- Stenographer
- St. Nicholas
- \*Strawberry Specialist
- Success
- \*Twentieth Century Farmer
- Typewriter and Phonographic World
- World's Work
- Youths' Companion

The following newspapers are regularly received and are placed on file in the Library:

- |                                 |                                 |
|---------------------------------|---------------------------------|
| *Albuquerque Citizen            | *Las Vegas Optic                |
| *Baltimore Weekly Sun           | New York Herald                 |
| *Capitol, Santa Fe              | *New York Weekly Tribune Farmer |
| *Carlsbad Argus                 |                                 |
| *Chicago Daily Drivers' Journal | *Otero County Advertiser        |
| Chicago Daily Tribune           | *Public Ledger                  |
| *Colfax County Stockman         | *Raton Gazette                  |
| *El Imparcial                   | *Rio Grande Republican          |
| *El Republicano                 | *Roswell Register               |
| *El Tiempo                      | *Santa Fe New Mexican           |
| *La Luz                         | *Review                         |

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\*Gifts.

### Science Hall

This is a large two-story brick building, situated to the north of the Main building. It contains eleven large rooms, and five smaller ones, besides large hallways. The lower floor is occupied by the departments of Chemistry and Domestic Science, while the upper floor furnishes quarters for the departments of Physics and Biology and Geology. All the class work of these departments is done in this building, and the Experiment Station work in chemistry, botany, and soil physics is carried on here.

### Engineering Buildings

These buildings, two in number, are located south of the Main building. They comprise, besides two large recitation rooms and hall, commodious rooms for wood work, machine work, foundry, and blacksmithing, an electric light plant, and a 40-horse power steam plant. These buildings are well equipped for engineering work.

### Women's Hall

This is a brick building, situated on the College Farm. It contains on the first floor a large dining hall, a large parlor, a smaller reception room, the matron's room, a kitchen, etc., and upstairs there are eleven well lighted and ventilated sleeping rooms, all nicely furnished. About thirty can be accomodated in the building.

### Other Buildings

Back of the main building are the feed rooms and horse sheds. These are for the horses of the students and professors.

An adobe farm building erected at a cost of about \$2,000 is located near the center of the farm. The greenhouse and the sheds for the storing of farm implements and machinery are located near the farm building. An adobe corral has recently been added to the farm equipment.

Recently appropriations have been made by the territorial legislature for a water works system, a gymnasium, a boys' dormitory and other improvements to the facilities now offered.

### GENERAL INFORMATION

The College of Agriculture and Mechanic Arts offers a great deal to the young people of New Mexico. Its courses of study and equipment are now equal to those of similar colleges in most of the older states and students can get a very thorough training here in any of the leading lines of practical education. New schools generally make greater efforts than the older ones, and the energy put forth and the instruction given are often superior. There are a great number of students sent from various parts of the territory each year to eastern colleges. We ask parents who do this, to investigate this college; and we believe if they will do so, it will get a share of their patronage, and that our people will manifest, in an increasing degree, their appreciation of the bounty of the United States and of the territory here dispensed. We know that this college is better fitted to do good work than some of the eastern schools patronized by our people.

Mesilla Park, N. M., is the postoffice and also the general freight and express office of the college.

There is now a good elementary public school at Mesilla Park, the course of study in which connects with that of the preparatory department of the college; so that parents who desire to live in the neighborhood of the college for the sake

of giving their older children its educational advantages, will also have at hand a good school for their younger children.

Strangers will find it more convenient to stop at Las Cruces, and go temporarily to some hotel. They should then report to the president, who will assist them in finding a boarding place.

*Students should be on hand the first day of the term. The necessity of this is too seldom realized. New students and those desiring re-examination should report on the day named for this work.*

### Fellowship

The board of regents determined in 1900 to establish one or more fellowships, of the annual value of \$300, open to graduates of the college and, in default of competent graduates who have specialized in the particular line of work required of the fellow, to graduates of other colleges. These fellowships will be tenable for one or two years, but not for a longer period, and will be awarded to promising graduates who desire to pursue their studies in one or more lines beyond the undergraduate curriculum, and who are willing and able to devote half of their time to assisting in the work of one of the departments of the college. The appointment will be made upon the joint recommendation of the head of the department in which the fellow is to serve and of the president of the college. A fellow will not be permitted to carry more than two full courses of study, without the express permission of the head of his department and the president of the college.

### Fees and Deposits

*Entrance Fee.* Each year all students, who are citizens of the United States, are charged an entrance fee of five dollars (\$5.00). This charge is made obligatory by territorial law. Students who are not citizens of the United States are charged a tuition fee of seventeen dollars (\$17.00) per term, or fifty dollars (\$50.00) per year.

*Book Deposit.* All students are required, each year, to deposit two and one-half dollars (\$2.50), with the registrar, as a guarantee that the proper treatment will be given to college



text-books and other property lent to them. At the close of the year or whenever the student withdraws from college, this deposit, less charges for damage to or loss of college property, is returned to him. Students who are notoriously careless with their text-books may be required to increase their deposits.

*Chemistry Deposits.* Students in all chemistry courses (except Chemistry A) must have on deposit with the Registrar, at the beginning of each term, the sum of five dollars (\$5.00) to cover breakage of apparatus used in this work. Students in furnace assaying must, in like manner, have on deposit ten dollars (\$10.00) to cover cost of crucibles, scorifiers, and other apparatus used up or broken. At the end of the year or upon withdrawal, these deposits, less breakage, etc., will be returned.

*Chemistry Fee.* At the beginning of each term, each student taking furnace assaying will be charged a fee of five dollars (\$5.00), to cover cost of gasoline and fluxes used.

*Mechanical Engineering Deposits.* Students taking any practice work in the Engineering Department, will be required to deposit with the Registrar, at the beginning of each year, five dollars (\$5.00) to cover breakage or damage, and must make additional deposits at any time, to meet similar expenses in excess of this amount. These deposits, less charges for breakage or damage, will be returned at the end of the year or upon withdrawal.

*Music.* Instruction in music is charged for by the lesson.

*Horse-stall Rent.* Twenty-five cents (25c.) per term is charged to each student or teacher using a horse-stall. This fee is used to keep the sheds clean.

### Text Books

Text-books are furnished by the college. They will either be sold to the student at cost, or lent. Students who are able should purchase their books. Many of them will be needed after leaving school, and they can be made to form the nucleus of a private library, which every student should be encouraged to collect.



### **Stationery**

As the college is nearly three miles distant from any store dealing in stationery, it has been found necessary for the accommodation of students to carry at the college a small line of articles, such as paper, pencils, pens, etc., which are sold to students, for cash only, at a small profit.

### **Boarding**

Although the college, as such, can do nothing towards furnishing board and rooms for men, the accommodations for all classes of students are becoming quite varied and ample: the college has attracted to its immediate vicinity private families, many of whom accommodate some students with board. The price for board, room, lights, etc., in families, varies from \$16 to \$25 per month; table board in families about \$15 per month. Not far from the College campus are cottages for rent. These are usually occupied by families who have moved in and taken up temporary residence for the purpose of educating their children. This is a very satisfactory solution of the boarding problem.

A boarding club for young men—a private enterprise, conducted by Mr. Charles L. Post, address, Mesilla Park—has been established. It is under the supervision of the faculty. The building is sufficient to room and board about forty students. Table board is also furnished to some who do not room in the building. So far as expenses are concerned, it is conducted on the co-operative plan. Rooms are furnished with study-tables; but students are expected to furnish their own bedsteads or cots, bedding, towels, etc. Rooms, however, will be fully furnished for those who desire it. The food is abundant, healthful and well-served. The cost to each boarder during the past year has averaged about \$14.00 per month. During the coming year, Mr. Post, who is a graduate of this college, will spend two hours each evening instructing those who wish to make up back work.

### **The Woman's Hall**

The Woman's Hall, situated on the College farm, will accommodate about thirty students. The price of board per

calendar month, with room, light, heat, and the washing of a dozen pieces including house linen, is \$17.00 when two young ladies occupy a room, and \$16.00 when there are three in a room, payable in advance on the first of each month. The rooms are comfortably furnished, but each student must provide comforts, blankets, sheets, pillow-slips, towels, napkins, napkin ring, and two laundry bags. The students name must be plainly marked on all the pieces.

The students are under the general supervision of the faculty, and in charge of the matron. For further particulars apply to the matron.

#### Estimate of Necessary Expenses

Various college incidentals.....	\$10 00...	\$10 00
Nine months' board and lodging at \$12 to \$18..	108 00 to	162 00
Laundry, per month at \$1 00.....	9 00..	9 00
		<hr/>
		127 00 to 181 00

#### Paid Labor

There is a considerable amount of labor on the farm, in the shops, and in the laboratories, that can be performed by students, and the policy is to give it to students rather than to others. Some students have been able to earn enough during the past year to pay their expenses; but those doing so have had constant employment in some subordinate position. The College cannot undertake to furnish work for all students who wish it, or need it, in anything like sufficient amount to pay expenses; and even if it could, the student's time is needed chiefly for study, recitation, and practice. Still, many worthy and industrious students pay a considerable part of their expenses by labor. Preference is given to those who are most trustworthy and meritorious, and who are regular and punctual in attendance, and correct in deportment. This labor is paid for at the rate of from  $7\frac{1}{2}$  to 20 cents per hour; but the faculty reserves the right to limit the amount of work any student may do.

### Religion

All students will be trained in the principles of morality, but no sectarian teaching will be tolerated in the college. Entire freedom of choice is given the students in selecting the church they will attend. Services are held at the following churches every Sunday: Roman Catholic, Presbyterian, Methodist, and occasional services are conducted by the Baptists and Episcopalians. At the Presbyterian church are held meetings of the Young People's Society of Christian Endeavor. With the Methodist church is connected the Epworth League.

### Discipline and Government

It should be impressed upon the youth of New Mexico that by the creation of the College of Agriculture and Mechanic Arts there has been provided for them the fullest and best opportunities to secure a practical education. Students, who enjoy the advantages here offered, should realize that to forfeit these privileges on account of their misuse or abuse is a matter of the most serious concern to them. No elaborate code for the conduct of students is prescribed. The college rules are mainly for the purpose of facilitating the college business. As regards behavior, students are expected to conduct themselves as ladies and gentlemen. If, after a fair trial, the influence of any student is found to be detrimental to scholarship, morals, or good order, dismissal will follow.

During the past two years, the students have been encouraged to take an active part in the administration of the college. The student body is organized, and there is a Student Conference Committee consisting of representatives from the student congress and from the faculty. This committee discusses informally all matters of student concern, whether proposed for discussion by the faculty or by the students, and recommends to the faculty and to the student congress such lines of action as seem to it to be wise. In matters of discipline the action proposed by the student congress is generally taken by the faculty.

### College Rules

As already stated, it is the policy of the faculty of this institution to deal with students in the most liberal manner possible. It is assumed that college students in an institution of this character are of sufficient age and advancement to know how to conduct themselves properly as ladies and gentlemen. In view of this policy this institution has no written rules relating to the conduct of students. Any violation of the usually accepted code of proper conduct is dealt with as the particular case may demand.

In order that students may know how to attend to the business requirements of the institution in regard to their studies, the library, college organizations, etc., quite a full list of rules of procedure are given below. These rules, while designed primarily for college students, apply, in many instances, to students of the preparatory department as well. In all special cases, the preparatory department has its own rules.

#### A

#### Matriculation, Etc

1. A student when first entering college, or at the first term of any subsequent year, must present himself

*To the President,*

who fills out the student's "admission card" and sends student with a "term assignment card"

*To the Course of Study Committee,*

which assigns studies, completes the "term card," and issues class cards to student, who goes

*To the Registrar,*

gives him the class cards, pays fees called for by his courses, takes receipt, and then reports

*To the Instructors,*

and shows each his receipt. If the receipt is satisfactory, the Instructor gives the student an order for textbooks, etc., and then assigns the lesson. The student then goes

*To the Librarian,*

and, showing her the book order, filled and signed by the

several Instructors, gets books, and surrenders order to the Librarian.

2. At the beginning of the second and third terms, a college student who has previously entered will procure a term assignment card from the *Registrar*, who will fill out the personal part of the card before giving it to the student; and the student will then go to the *Course of Study Committee* and the procedure will from this point be the same as at the beginning of the year, except that the student need not go the Registrar again unless he is assigned to a course which requires the payment of a special fee or deposit.

3. *Students* must preserve the receipts they receive at the beginning of the year, and show them to their instructors at the beginning of each term as a condition of admission to class. If the receipt is lost, a duplicate may be obtained from the Registrar upon payment of a fee of 10 cents.

4. *An Instructor* must not admit a student to his class, even though he have a class card, unless he shows the Registrar's receipt or receipts for all fees and deposits required of members of the College taking the course in question.

## B

### Grading, Examination, and Classification of Students

1. The system of grading is on a scale of 100.

2. At the end of each term, unless special action be taken by the faculty to the contrary, examinations are held in all subjects, or parts of subjects, taught during that term.

3. In making up the term grade in any subject, in case an examination has been held, the average daily grade is added to the examination grade and the sum divided by two. In case no examination is held at the end of a term, the average daily grade is taken as the final mark for term.

4. The method of determining the average daily grade, except in the matter of absences, is left to the instructor in charge of the class.

5. In determining the average daily grade, an amount is deducted for unexcused absences proportional to the amount



of work missed; unless the absence occurs in the first or last week of the term, or in the week preceeding or succeeding a vacation, in which case it counts double. Excused absences count the same as those unexcused, unless the work missed is made up to the satisfaction of the instructor in charge.

6. Any student receiving an everage daily grade of 85, or over, in any subject, may, at the discretion of the instructor in charge, have this mark taken as the final grade for the term, in that subject, without having to take an examination.

7. If a student receive a final term grade of 70 or over, in any subject, he shall be passed; otherwise he shall be conditioned.

8. (a). A student conditioned in any subject has a chance to remove his condition by taking a re-examination in the subject. If he fail in the re-examination, or fail to take the same at the specified time, credit for the work will only be given after he has repeated the subject in class and made a passing grade on the same.

(b). All re-examinations for failures in entrance examinations, or in studies during any year except the Senior, take place in the first week of the first term of the next year.

(c). All re-examinations for failures during the first two terms of the Senior year must occur before the beginning of the third term of that year.

9. If a student, at the end of any term, fail in every subject or in every subject save one he may be at once dropped to a lower class, or from college, as the faculty may decide.

10. Whenever a student, by action of the faculty, is put into a lower class, he may be required to repeat all the studies of that class, whether he has previously passed in them or not.

11. No student taking a regular course is allowed to take up any subject in that course until he has passed in all preceeding work necessary to fit him for that subject. Neither will such a student be excused from any prescribed work in that course except by special action of the faculty.



12. No special student is allowed to enter any class unless, in the opinion of the instructor in charge, he is thoroughly prepared in all necessary preceding branches.

13. In case of any conflict in the course of study, unless otherwise ordered by the faculty, the higher subject shall give way to the lower.

14. Regular college students are classified as Freshman, Sophomores, Juniors, or Seniors, according to the number of hours work they have completed. Thus if the number of hours required per week is 20, the number of weeks per year 36, and the number of years 4, then the minimum number of hours required for graduation would be  $20 \times 36 \times 4 = 2880$ . In this case, a student would be classified as a Freshman until he had completed 720 hours, and thereafter as a Sophomore until he had completed 1,440 hours, etc.

In the above scheme, two hours of drawing, laboratory work, shop practice, or field work, are counted as equivalent to one hour recitation.

15. (a) No grade from another school will be accepted as an equivalent of work in this institution unless said school ranks as high as this one, and then only by special action of the faculty.

(b) In all other cases, in which a student desires credit for work done elsewhere, the same will only be given after the student passes a satisfactory examination in this institution.

16. A record is kept of the work of each student, and at the end of each term, reports showing the grades, etc., of the different students, are sent to their parents or guardians.

## C

### Graduation

1. Seniors having conditions at the beginning of the third term of the senior year will not be considered candidates for a degree.

2. A student, in order to graduate, must have completed the full amount of work included in one of the college courses

of study, or an equivalent of the same which has been accepted by the faculty.

3. Each candidate for graduation is required to prepare a thesis, which shall be passed upon by a committee consisting of the head of the department in which the work was done, the professor of English, and the president.

4. Any graduate may be required by the faculty to give an exercise on commencement day, consisting of an oration or an extract from or an abstract of the thesis.

5. Subjects for theses must be presented to the faculty for approval not later than the end of the second term of the senior year.

6. All theses must be handed in for inspection by the committee referred to under section 3, before the beginning of the senior vacation, and the finished thesis must be filed with the Registrar not later than the beginning of the second week of the senior vacation.

7. A thesis, in order to be finally accepted, must be clearly written, or type written, on good linen paper, size 8x10½ inches, bound, and a copy delivered to the Registrar for permanent preservation.

8. Seniors are given a vacation during commencement week and the week immediately preceding.

## D

### Absence and Tardiness

1. A male student who is absent or tardy must state the reason for such absence or tardiness, to the different instructors concerned, the first time he meets said instructors in class thereafter. If no such statement is rendered the student will be marked zero for the work missed.

2. A female student must, in a similar manner, present to the different instructors concerned, not later than the second time she meets said instructors in class thereafter, a written statement from the dean of women as to whether an absence or tardiness has been satisfactorily explained.

3. Any student who is absent from a regular examination

at which he should be present, shall be required to present to the instructor in charge a satisfactory excuse for the same, in default of which said student shall at once be suspended from college.

## E

### The Library

1. Subject to the following rules, books and periodicals may be drawn from the library by making the necessary application to the librarian.

2. (a) Temporary assignment of library books may be made to the different departments of the institution by the librarian, subject to the approval of the president. Books so assigned may be recalled at any time.

(b) Indefinite assignment of library books and periodicals may be made to the different departments by the library committee, subject to the approval of the faculty. Books and periodicals so assigned can only be recalled by faculty action.

3. No library book, unless in a department library, may be kept out for more than two weeks consecutively. For each day overtime a fine of three cents is imposed.

4. Encyclopedias and similar works of reference must not be taken out of the library, except by special permission of the librarian.

5. (a) Current numbers of periodicals may not be kept out of the library longer than over night, except during the period from Friday evening to Monday morning. (b) The last seven issues of the dailies, the last four issues of the weeklies and the last two issues of the monthlies are considered current numbers.

6. Current numbers of periodicals may not be drawn sooner than one hour before the library is closed and must be returned by 9:00 a. m. of the day on which rule 5 calls for their return.

7. Periodicals, other than current numbers, will be governed by the same rules as library books.

8. No book or periodical assigned to any department may

be drawn without the express consent of the head of that department.

9. Fines will be imposed by the librarian for loss of, or unreasonable damage to, library books or periodicals.

## F

### College Organizations

1. The public exercises of all societies, classes, athletic teams, or other organizations connected with the college, are subject in time, place and character, to the approval of the faculty. All rooms assigned for the use of societies, or other organizations, shall be occupied subject to the faculty's control.

2. All societies, classes, athletic teams, or other organizations connected with the college, are required to notify the faculty in writing of all dates desired for public exercises. When possible, such notices shall be given at least two weeks before such exercises are to be given.

3. The faculty reserves the right of passing upon the constitution and by-laws, and all subsequent amendments to the same, of all societies organized in connection with the college.

## G

### Miscellaneous

1. (a) Stalls are provided for the horses of officers and students who ride or drive to the college. These stalls are rented at the beginning of each term, twenty-five cents per term being charged for each single, and fifty cents per term for each double stall; the amount to be paid in advance.

(b) The members of the faculty and other officers have first choice of stalls, and the Seniors, Juniors, Sophomores, Freshmen, students in the stenography course, preparatory students and special students, have choice of the remainder in the order named.

2. Carriages must be so arranged about the horse stalls that an open passage is left between the carriages and stalls, and horses must not be tied in places where they block the passage to the stalls.

3. The first Friday in May is a holiday set apart for athletic sports, and is known as Field Day.

4. The faculty may, at any time, deprive a student, whose college work is unsatisfactory, of the privilege of taking part in any team or public athletic work.

5. Smoking, or the carrying of lighted pipes, cigars, or cigarettes, is not permitted in or about any of the buildings of the college and experiment station.

### DONATIONS AND CONCESSIONS

During the past history of the college, a number of things have been given to the institution and exceptional concessions have been made upon the prices of material which it was necessary to buy. The management wishes to express formally and publicly its thanks for all such gifts and concessions. Appended will be found a list of the gifts and the names of the donors, to whom we are most sincerely thankful.

The various departments of the institution will gladly receive any gifts of material, books, separates, or apparatus which may be added to our museum, library, or teaching equipment, and will most willingly pay transportation if notified of the charges. Particularly is this true of mineralogical, geological, archæological, zoological, or botanical material from any part of the territory. Single specimens are of small value when thrown about the house, but a museum is made up of just such single specimens collected in one place and properly arranged. We need a good museum, and already have some considerable collections to which we are adding all the time. We also have case room for such material, and men to take care of it properly. All communications on this subject should be addressed to the president, and all material sent us should bear the name and address of the sender.



# DONATIONS

## To the Preparatory School

ARTICLE	DONOR
Framed picture. "Battle of Gettysburg"	The A Class, Preparatory School 1899-1900
Framed picture, "Sunset at Capel"	The Preparatory Teachers of 1900-'01
Carved oak picture frame.....	Alva M. Walker, Junior Prep. 1901
Carved oak picture frame.....	Walter E. Goebel, A Class, 1902
Carved panel.....	Professor R. R. Larkin

## To the Dormitory

A Schoninger piano.....	Mr. Numa Reymond
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## To the Library

Two bronze statuettes with pedestals.....	Mr. Numa Reymond
An antique musical instrument from the Philippines...	Mr. E. G. Piper
Unmounted pictures.....	Mr. J. C. Dana
A collection of poems.....	Prof. W. A. Sutherland
Trade List Annual and English Reference Catalogue	Mr. E. A. Whitaker
One Volume Mexican Boundary Survey.....	Mr. E. W. Sherfy
Monograph on Uintacrinus. ....	Mr. Frank Springer
San Francisco Fiction List.....	Mr. C. E. Dudley
One novel.....	Mr. W. V. Baker
Plants and flowers.....	Prof. Garcia
Cut flowers.....	Mr. F. E. Lester

## To the Department of Biology and Geology

A number of specimens of English and other plants (probably 350)	Prof. T. D. A. Cockerell
One specimen of Staurolite.....	Rev. W. A. Cooper
A number of Fossils from near Silver City.....	Miss M. T. Metcalfe
A number of specimens of copper ore.....	Mr. R. Y. Anderson
A number of specimens of silver and go'd ore.....	Señor Palacios
Several specimens of silver and gold ore.....	Miss Helen Worden
A number of fossils from near Lake Valley.....	Mr. George Grover

## To the Department of Agriculture and Horticulture

### GIFTS AND LARGE CONCESSIONS

Wonder Grain Grader.....	Eureka Mf'g. Co., Lincoln, Neb.
Miscellaneous seeds.....	John A. Salzer Seed Co., La Crosse, Wis.
10 gal. Chloro-Naphtholeum Dip, West Disinfecting Co., New York City	
Miscellaneous corn seeds.. ....	Iowa Seed Co., Des Moines, Ia.
Miscellaneous shrubs and seeds, Iowa Agricultural College, Ames, Ia.	

Ditch Stop.....	Mead Hay Press Co., Pueblo, Colo.
Hallock Weeder and Cultivator	
	Hallock Weeder and Cultivator Co., York, Pa.
Calf Feeder.....	Our Husbands Mfg. Co., Lyndon, Vt.
Orchard Cultivator, Planet Jr. Plow, Planet Jr. Harrow, Seeder	
	S. L. Allen & Co., Philadelphia, Pa.
Corn Planter and Check Rower. Press Drill with Grass Seeder attachment.....	Hoosier Drill Co., Richmond, Ind.
Woven Wire and Gates.....	American Steel & Wire Co., Chicago, Ill.
Two-horse Threshing Machine.....	Heebner & Sons, Lansdale, Pa.

## STUDENT ORGANIZATIONS

### The Student Congress

This is an organization of the students designed to promote "self-government." Matters of importance concerning the conduct of students are brought to the attention of this body before final action is taken by the faculty. The power delegated to the organization is only advisory, yet its wishes are seldom disregarded. Although the Student Congress, as an organization, is still in its infancy, it is already recognized as a powerful factor in all college affairs. The members of the executive committee of the organization are elected each term and are as follows: president, vice-president, secretary and treasurer, and two delegates from each of the following classes: Senior, Junior, Sophomore, Freshmen, Stenography, and Senior Preparatory. The officers for the third term are:

Walter Danburg.....	President.
Isabelle Mordy.....	Vice President.
Maude McFie.....	Secretary and Treasurer.

### The Columbian Literary Society

The society was organized October 25, 1891, under the name of Alpha Chi. In 1892 this was changed to Columbian, since which time the society has made steady and prosperous growth. Until about the middle of 1894-5 only men were admitted as members, but since that time women have had equal membership privileges. The object of the society is to promote and encourage conscientious and practical literary and musical work by readings, essays, papers, debates, vocal

and instrumental music, and such other exercises as the committee on program may prescribe. Each year the society gives a public entertainment, generally of a dramatic character, and the drill and training is of great value to those who take part. The self-possession, knowledge of parliamentary law, and skill in debate, which faithful members of this society gain, are of inestimable value to them in after life.

To be eligible to membership a student must be pursuing work in (1) any of the regular four year college courses, (2) either of the two year short courses, or (3) either of the stenography courses. A fee of two dollars is charged each new member, which fee admits him to the society and gives him one year's subscription to the college paper. Dues of fifty cents are paid each succeeding term. Attendance on all regular meetings is obligatory, and non-performance of duty is punishable by fine.

Regular meetings are held on Friday afternoon of each week and an evening meeting is held on the second Friday of each month. Visitors are allowed during the literary part of the meetings. Officers are elected at the beginning of each term. The officers for the third term are:

J. S. MacGregor	.....	President.
Adelaide Hughes	.....	Vice President.
Frances French	.....	Recording Secretary.
Beth Foster	.....	Corresponding Secretary.
Nellie Newton	.....	Treasurer.
Robert Metcalfe	.....	Librarian.
G. V. Howard	.....	Critic.
Maud McFie	.....	Vice Critic.
George Brunner	.....	Marshal.
Geo. Brunner, M. McFie, Lute Foster	..	Literary Committee.
Beth Foster, Jean Johnson, R. Calderon	....	Ex. Committee.

#### Liceo Cervantes

A Spanish literary society was organized during the past year for the benefit of the students and others interested in the study of Spanish. The Liceo meets every second Wednesday afternoon, and papers, essays, readings, debates,

songs, discussions, etc., are rendered, all in Spanish. Even the parliamentary proceedings are carried on in Spanish, and a fine is imposed upon anyone speaking English without permission from the President. Colors, crimson and gold. Motto, "El que quire hablar bien, debe principiar por hablar mal." It is intended that the organization shall be permanent, and by furnishing much good practice and assisting the student in overcoming the natural timidity of speaking, not only in public but in a foreign tongue, it will certainly accomplish much. The officers for the third term are:

Alfredo M. Sanchez.....	Presidente
H. P. Flint.....	Vice Presidente
Rafael Calderon, Jr.....	Secretario
Maude McFie.....	Tesorero
R. Hernandez Baca.....	Critico
O. B. Metcalfe.....	Vice Critico
Lawson D. Lowe.....	Censor Morum
W. A. Sutherland, Isabelle Mordy, M. Metcalfe,	
Comité de Programa.	

### The Collegian

The *New Mexico Collegian* is published and managed by the Columbian Literary Society. Members of this society only, are eligible to positions on the staff, but the best literary work of any student is given a place in the *Collegian's* pages.

The *Collegian* was founded in 1892, and since that time has been published regularly each school month. The aim of its management has always been to make it a true exponent of student life in the institution. College work and the social affairs of the college community, past and present, are given prominence in its columns. Old students of the college are apt to be on its subscription list, since it keeps them in touch with college life and college friends as nothing else can.

With the exception of the Commencement number, the *Collegian* is supported entirely by the subscriptions, the advertisements, and the gratuitous labor of the members of the Columbian Literary Society. Special effort is made to

make the annual Commencement number particularly attractive.

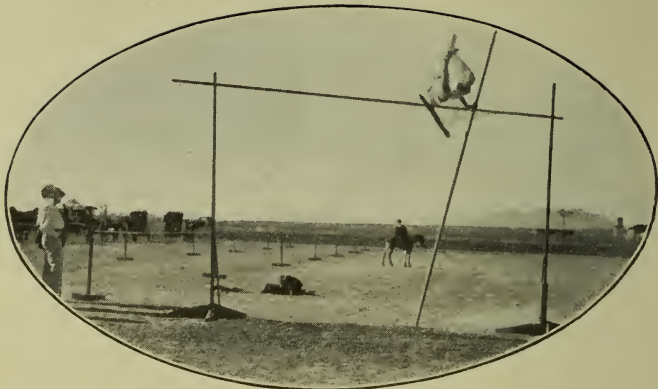
### Staff

The editor-in-chief and business manager are elected for the scholastic year, but the associate editors are elected each term at the regular election of officers of the Columbian Society.

For 1901-'02	For 1902-'03
Robert Metcalfe....	Editor-in-chief.....
Maude McFie	
Carl Snow.....	Business manager....
George Disinger	







### THE ATHLETIC ASSOCIATION

It might be said that athletics have just begun to reach their proper place of importance in this territory; and although our athletic association has been in active existence since 1893, it has always been handicapped by the lack of teams from other schools with which to compete. This will not be the case hereafter, since the territory now has an intercollegiate association, and will have, in the future, a regular annual track meet, at some point agreed upon by the contestants.

This intercollegiate association was organized and its constitution drawn up at a recent meeting of representatives from the principal schools of the territory. The part taken in it by the A. & M. college is well shown by the results of the first intercollegiate track meet, held at Mesilla Park, June 3, 1902. As this meet was arranged on short notice only one other school, the Normal University of Las Vegas, was able to take part, but the final score of 85 to 19 shows the good work of our boys.

The following is a list of territorial records so far as we know them.

100 yards dash.....	10 3-5.....	A. & M. College.
Standing broad jump;	9 ft. 4 in...	“ “
Running “ “	19 ft. 3 in...	“ “

220 yard dash.....	25 3-5 sec...	Vegas Normal University
Standing high jump...	4 ft. 9 in...	A. & M. College.
Running " " ...	5 ft. 2 in...	" "
120 yard hurdles.....	17 2-5 sec...	" "
Putting shot (12 lb.)	39 ft. 3½ in..	" "
Throwing hammer " 100 ft.	9 in...	" "
440 yard race.....	53 4-5 sec...	" "
Pole vault.....	10 ft.....	" "
Discus throw.....	87 ft. 9 in...	" "
880 yard run.....	2 min. 34 2-5 sec.	

Our college athletic association had this year an enrollment of over ninety members and the whole student body showed a great deal of interest in athletics. The college campus is probably the best in the territory for such games as foot ball, basket ball, etc., while the athletic association with something like \$600 on hand, is now in a condition to fix up good tracks, etc., for next year's sports.

A member of the athletic association has access to foot ball suits, base ball suits, tennis courts and balls, the usual outfit for field sports and a shower bath on the grounds.

The cost of membership is, for men, an admission fee of one dollar (\$1.00), a monthly assessment of 25c., while for women the charges are but half this amount. Quite a few of the members are girls who take an active part in tennis and basket ball.

## ALUMNI

## Officers of the Alumni Association

FOR 1901-1902.      FOR 1902-1903.

President.....	J. D. Tinsley...	George M. Williams.
First Vice-President...	Iva R. Mead....	Frances French.
Second           “	...Chas. L. Post....	I. H. Stanley.
Secretary.....	Fabian Garcia...	Elizabeth C. Foster.
Treasurer.....	Oscar C. Snow...	Charles L. Post.

## Class of 1894

Fabian Garcia, B. S., Assistant Professor of Horticulture and Horticulturist to the Experiment Station, New Mexico College of Agriculture and Mechanic Arts, Mesilla Park, New Mexico.

Mrs. Agnes Herbert, (née Williams), B. S., Housewife, Hondo, New Mexico.

R. Roy Larkin, B. S., Principal Public Schools, Gallup, New Mexico.

Lamuel C. McGrath, B. S., Merchant, Lordsburg, New Mexico.

Oscar C. Snow, B. S., Ranchman, Mesilla Park, New Mexico.

## Class of 1895

Mrs. Jessie Rhodes, (née Casad), B. S., Housewife, El Oro, D. F., Mexico.

## Class of 1896

Mae Gilmore, B. S., Teacher, Alamogordo, New Mexico.

Alfred M. Holt, M. S. Deceased, 1901.

Albert H. Peterson, B. S., Mechanic, Chicago, Ill.

Clarence E. Rhodes, B. S., with American Mining Co., El Oro, D. F., Mexico.

## Class of 1897

Joseph F. Bennett, Jr., M. S., with the Sullivan Machinery Co., El Paso, Texas.

Elgin B. Holt, B. S., Cattleman, Graham, New Mexico.

Arthur E. Williams, B. S., Capitan, New Mexico.

**Class of 1898**

Edwin E. Casey, B. S., U. S. V. Deceased, 1898.

Duval G. Cravens, B. S., Master of Mathematics and Spanish, St. Alban's School, Radford, Va.

Charles E. Mead, B. S., Druggist, San Marcial, N. M.

Iva R. Shallenberger, (née Mead), B. S., Housewife, Albuquerque, N. M.

Isaac H. Stanley, B. S., Pinos Altos, N. M.

William A. Sutherland, B. S., U. S. Civil Service, Manilla, P. I.

Lottie Sweet, B. S., Teacher, Las Cruces, N. M.

George M. Williams, B. S., Ranchman, Las Cruces, N. M.

**Class of 1899**

Edward J. Coe, B. S., Fruit Grower, Stanton, N. M.

Walter E. Holt, B. S., U. S. Customs Service, El Paso, Tex.

John D. Tinsley, B. S., Professor of Physics and Soil Physicist, Vice Director of the Exper. Sta., N. M. College of A. and M. Arts, Mesilla Park, N. M.

**Class of 1900**

William Cory Meeker, B. S., Clifton, Arizona.

Charles Lewis Post, M. S., Assistant in Chemical Dept., N. M. College of A. and M. Arts, Mesilla Park, N. M.

Archie Bruce Sage, B. S., Assistant Professor in Mechanical Engineering, N. M. College of A. and M. Arts, Mesilla Park, N. M.

Halbert E. P. Thomas, B. S., Instructor of Physics, Chemistry and Geology, New Mexico Normal School, Silver City, N. M.

**Class of 1901**

Leah Nora Newberry, B. S., Teacher, Engle, N. M.

Minnie Wilson Sutherland (née Newberry), B. S., Housewife, Manilla, P. I.

Alfredo Marcos Sanchez, B. S., Assistant in Division of Soils, U. S. Dept. Agric., Washington, D. C.

Matthew Steel, M. S., Las Cruces, N. M.

**Class of 1902**

Theron Catlin Bennett, B. S., Pierce City, Mo.

Elizabeth Coger, (née Coleman), B. S., Housewife, Alamo-gordo, N. M.

Elizabeth C. Foster, B. S., Las Cruces, N. M.

Frances French, B. S., Las Cruces, N. M.

James Stanislaus Macgregor, B. S., Assistant in Mechanical Engineering, N. M. College of A. and M. Arts. Mesilla Park, N. M.



## CATALOG OF STUDENTS

### Graduate

Sanchez, Alfredo Marcos.....Mesilla  
Steel, Matthew.....Las Cruces

### Senior

Bennett, Theron Catlin.....Pierce City, Mo.  
Coleman, Elizabeth .....Mesilla Park  
Foster, Elizabeth C.....Las Cruces  
French, Frances.....Las Cruces  
Hubbard, Harry Jenkins.....Marfa, Texas  
Macgregor, James Stanislaus.....Mesilla Park

### Junior

Ford, Fannie.....Las Cruces  
Metcalf, Orrick Baylor.....Silver City  
Metcalf, Robert James .....Silver City  
Mordy, Isabelle.....Laguna  
Mott, Rowena .. .....Las Cruces  
McFie, Maude Elizabeth.....Santa Fe  
Nelson, Ina Mae.....Lake Valley  
Wickham, Mary C.....Socorro

### Sophomore

Foster, Lute.....Las Cruces  
Nabours, Benjamin Franklin.....White Oaks  
Snow, Robert Carl.. .....Tiptonville, Tenn.  
Stinnett, Russell Tamah .....Bells, Va.

### Freshman

Coleman, Ruth.....Mesilla Park  
Ford, Annis Bell.....Las Cruces  
Freeman, Annie May.....Anthony  
Harney, Annetta May'.....Cerrillos  
Hart, Reginald Henry.....El Paso, Texas  
Newberry, Henry Clay.....Mesilla Park  
Newcomb, Elizabeth Simone.....Las Cruces  
Ramirez, Rafael.....Las Cruces  
Shaw, Maymie Elizabeth.....San Marcial

### Special

Baird, William Wallace.....El Paso, Texas  
Brown, John Maughs.....Belmont, Calif.  
Brunner, George.....El Paso, Texas

Clancy, Carlos Cornelius.....	Puerto de Luna
Crocker, Allen C.....	Leaminster, Mass.
Crosby, William Willis.....	Trinity, New York
Davis, Edward B.....	Boston, Mass.
Eldridge, Elizabeth.....	Gallup
Foster, Florence.....	Las Cruces
Gamboa, George..	Mesilla
Hodgdon, Mary Blanchard.....	Deming
Jacoby, Clara.....	Las Cruces
Jacoby, Lydia.....	Las Cruces
Lane, John H.....	White Oaks
March, D. G.....	Missouri
Mestas, Solomon A.....	Clayton
Metcalf, Mary Thomas.....	Silver City
Newlin, Roy.....	Bloomington, Ind.
Piper, Edward G.....	El Paso, Texas
Poe, Oscar Leroy.....	Mesilla Park
Wharton, Florence.....	White Oaks
Wylie, Frederic Tuttle.....	Las Cruces

### Practical Mechanics

Bloodgood, Dean Ward Actly..	Kingston
Connolly, Robert Emmet.....	Deming
Cook, Thomas Edward.....	Lordsburg
Disinger, George Harry.....	Hillsboro
Fielder, Herbert Austin.....	Silver City
Gilmore, Matt.....	Alto
Goebel, Walter Emile.....	Belen
Gonzales, Alejandro.....	Mapimi, Durango, Mexico
Goodin, Frank Marion.....	White Oaks
Hughes, John David.....	Albuquerque
Jacquot, Walter.....	Springer
Jennings, Harry Lee.....	Lordsburg
Larrazola, John Baptiste.....	Las Vegas
Miller, Bernard.....	Cliff
Miller, Walter Lucas.....	Santa Fe
Olinger, Robert Wallace.....	Mesilla Park
Weaver, Elmore Allen.....	Deming

### Twelve Weeks' Agriculture

Rederich, J. E.....	Kansas
Warren, A. J.....	Albuquerque

### Stenography

Baca, Ricardo Hernandez.....	Chihuahua, Mexico
Caden, Arthur Brooke.....	New York City

Calderon, Rafael .....	Chihuahua, Mexico
Danburg, Walter Malcolm.....	Las Cruces
Davis, Laura L.....	Herndon, Va.
Dennis, Florence E.....	Chicago, Ill.
Evrst, Charles .....	Los Angeles, Calif.
Flint, Henry Phillips.....	Otero County
Flint, Nigel Campbell .....	Las Cruces
Fountain, Katherine Mary.....	Mesilla
Griffin, John B.....	Carlsbad
Hart, Gustavus Edward .....	San Francisco, California
Horton, George Aaron.....	Auburn, New York
Howard, George Volney.....	Santa Fe
Hubbard, Eda Luzetta.....	Marfa, Texas
Hughes, Adalaide Margaret.....	Washington, D. C.
Huse, Sidney C.....	Comanche, Texas
Johnson, Jean Refuighita.....	Mesilla Park
Lowe, Lawson David.....	Las Cruces
Mejia, Albino.....	Solomonville, Ariz.
Moseley, Alexander Jackson.....	Union Springs, Ala.
Rouault, Theodore, Jr.....	Las Cruces
Stanley, Alice C.....	Lansing, Mich.
Wallace, Miriam Lapsley.....	Cloudercroft
Watkins, Lida Opal.....	Deming

## PREPARATORY SCHOOL

### Senior Preparatory

Blinn, Mary .....	Kelly
Bouts, John William.....	Topeka, Kansas
Deemer, Phyllis Barbour.....	Sierra Mojada, Mexico
Deemer, Ralph Barbour.....	Sierra Mojada, Mexico
Finney, Ray Arlington.....	San Marcial
Givens, Guy Cumston.....	Hillsboro
Graham, Earl Addison.....	Magdalena
Lapoint, William Pierre.....	Las Cruces
Neal, Homer Herbert.....	Mesilla Park
Pelphrey, William.....	Alamagordo
Quintero, Jose.....	Mesilla
Roberts, Guy Malcolm.....	Trenton, Mo.
Walker, Alvah Mauser.....	Denton, Texas

### Junior Preparatory

Ascarte, Nemecia Virginia.....	Las Cruces
Carrera, Theodorlinda.....	Las Cruces
Chaves, Manuel Ramon.....	Mesilla
Dessauer, Philip Edward.....	Las Cruces

Freeman, John Jewell.....	Anthony
Garrett, Dudley Poe.....	Las Cruces
Gilliam, Rexie Emmet.....	Earlham
Graham, Allen Givens.....	Magdalena
Hammond, Laura Virginia....	Gap Creek, Tenn.
Hostetter, Cecil Philip.....	Las Cruces
Hostetter, Hazel Hannah.....	Las Cruces
Isaacks, Coila Nancy .....	Las Cruces
Isaacks, William Frederick.....	Las Cruces
Llewellyn, Gladys.....	Las Cruces
Nabours, Bessie Luella.....	White Oaks
Newton, Fred Nevarra.....	Earlham
Nevarez, Jesus F .....	Las Cruces
Payne, Chester.....	El Paso
Pearson, Trust.....	Lordsburg
Rouault, Ernest.....	Las Cruces
Scoggins, Beulah .....	Mesilla Park
Shaw, Rena Alvena.....	San Marcial
Stoneking, Jay Benton.....	Kelly
Yoast, Irvin Henry.....	Las Cruces

#### A Class

Aldrich, Ray.....	Gallup, N. M.
Caldwell, George Robertson.....	Mesilla
Cook, Talley B.....	Deming
Evans, Flora Lucille .....	Ysleta, Texas
Ford, Alice Bessie.....	Las Cruces
Ford, Lela Ray .....	Las Cruces
Foster, Ethel.....	Las Cruces
Fraide, Berardo.....	Las Cruces
Gonzales, Jesus Domingues. ....	Mesilla Park
Harper, Dora.....	Clifton, Ariz.
Hatton, Thurman Timbrook.....	Las Cruces
Hitchcock, James.....	San Marcial
Llewellyn, Ida May .....	Las Cruces
Lockwood, Kent F .....	Lake Valley
McConnell, Harry Charles.....	Toronto, Canada
McLean, John William.....	Metcalf, Ariz.
Mackedon, Edward Joseph.....	San Pedro
Mordy, Jessie Laura.....	Laguna
Nattress, Charles H.....	San Marcial
Newcomb, Alice Juanita.....	Las Cruces
Opgenorth, Henry.....	Hillsboro
Poe, James Ralph.....	Mesilla Park
Quintero, Fernando.....	Las Cruces

Ramirez, Juan.....	Las Cruces
Sells, George Beard.....	Las Cruces
Smith, Fray.....	Nogal
Steel, James Alexander.....	Las Cruces
Sweet, Jacob Allen.....	Las Cruces
Yoast, Mamie Etheline.....	Las Cruces

### B Class

Carrera, Emile. ....	Las Cruces
Coleman, Daniel Ransom.....	Mesilla Park
Elliott, Richard H.....	Cambray
Goebel, William Curt.....	Belen
Kimber, Fleta.....	Mesilla, Park
Lewis, Florence.....	Gallup
Lucero, Francisco.....	Las Cruces
Lucero, Miguel.....	Mesilla
Nabours, Myrtle Vance.....	White Oaks
Piñones, Gabriel. ....	Mesilla
Sampson, Irving Wilber.....	Las Cruces
Scoggins, Clifford Oberia.....	Mesilla Park
Stewart, Herbert Clyde.....	Mesilla Park
Welch, Mrs. Della.....	Santa Rita
Young, Donald Waddill.....	Las Cruces

### C Class

Alleman, Herbert... ..	Chihuahua, Mexico
Angel, Ygnacio.....	Las Cruces
Baker, Stewart Knight.....	Las Cruces
Chavez, Abraham.....	Monticello
Deemer, Dixon.....	Sierra Mojada, Mexico
Dessauer, Numa Raymond.....	Las Cruces
Exter, Simeon.....	Rosedale
Fraide, Agnes.....	Clifton, Ariz.
Fountain, Albert J.....	Mesilla
Garza, Francisco.....	Las Cruces
Guerra, Juan.....	Mesilla
Herrera, Louis.....	Las Cruces
Howell, Edith.....	Santa Rita
Llewellyn, W. H. H., Jr.....	Las Cruces
Luna, Carlota.....	Las Cruces
Miller, Edwin Wright.....	Las Cruces
Morrison, Robert.....	Prescott, Arizona
Reza, Adolfo.....	Las Cruces
Salmon, Frances.....	Mesilla
Saucedo, Jose.....	Las Cruces



Skidmore, Frank.....	Las Cruces
Trujillo, Candido.....	Mesilla
Uranga, Armando.....	Las Cruces
Yongue, Roy.....	El Paso, Texas

### Special Class

Barela, Venceslas P.....	Hatch
Chavez, Eduardo.....	Monticello
Gonzales, Merced.....	Las Cruces
Green, Edward.....	Bisbee, Arizona
Jaramillo, Abel.....	Monticello
Lara, Jesus.....	Las Cruces
Medina, Joaquin.....	Clifton, Arizona
Medina, Juan.....	Clifton, Arizona
Medina, Raphael.....	Clifton, Arizona
Nevarez, Manuel.....	Las Cruces
Nuanez, Ygnacio..	Monticello
Sanchez, Demetrio.....	Burley
Sanchez, Salvador.....	Monticello
Torres, Donaciano.....	Las Cruces
Wallace, Harry.....	Metcalf, Ariz.

PROGRAM OF RECITATIONS

FIRST TERM: MORNING

TIME	SENIOR PREPARATORY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	STENOGRAPHY
8:30	General History (T. W. Th. F. *) <i>Myers</i>		Spanish† Latin	Analytic Geometry	Mineralogy Rural Engineering (M. W. F.)	Stenography
9:25	English (M. T. W. Th.) <i>Matthews. J. W.</i> <i>to Am. Lit</i>	Plane Geometry	Physics	Pomology (M. T. W. Th.) Elementary Mechanics (M. T. W. Th.) Floriculture (M.)	Mineralogy Rural Engineering (F.)	Commercial Span- ish
10:20		Spanish Latin	Physics (F.)	Economic Entomology (M. W. F.) Meteorology (T. Th.) Canning and Preserving (M. W. F.) Floriculture (T. Th.)	Bookkeeping	
11:15	Agriculture (M. W. F.) Floriculture (M. W. F.) Freehand Drawing (T. Th.)	English <del>Spanish</del>	Trigonometry	Canning and Preserving (M. W. F.) Floriculture (Th.) English (T.)	Agricultural Chemistry (M. W. F.)	

\* M. T. W. Th. F. = Monday, Tuesday, Wednesday, Thursday, and Friday.

† Subjects without letters after them recite daily.

*Boyle's Exercises in English*  
*Lockwood's Lessons*  
*White's Penmanship*

## PROGRAM OF RECITATIONS

## FIRST TERM: AFTERNOON

TIME	SENIOR PREPARATORY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	STENOGRAPHY
1:10	Algebra <i>Algebra higher algebra</i>	Biology	English	Chemistry	Steam Engine (T. W. Th. F.) Psychology	
2:05	Carpentry (T. Th.) Cooking (T. Th.) Sewing (W. F.)	Biology Woodturning & Forging	Pattern-making	Bench Work in Iron (M. W.) Machine Design (T. Th.)	Machine Shop (M. W.) Designing (T. Th.) Dressmaking (Th.) Dairying	Stenography
3:00	Carpentry (T. Th.) Cooking (T. Th.)	Woodturning & Forging Greenhouse Handicraft (M.) Greenhouse Management (W. F.) Live Stock & Scorecard (T. Th.)	Pattern-making	Bench Work in Iron (M. W.) Machine Design (T. Th.) Astronomy	Machine Shop (M. W.) Designing (T. Th.) Dressmaking (Th.) Dairying (M. W.) Dietetics (M. W.) English (F.)	Special work
3:55	Carpentry (T. Th.)	Greenhouse Handicraft (M.)		Bench Work in Iron (M. W.)	English (T.)	Adv. Stenography, (M.)

PROGRAM OF RECITATIONS

SECOND TERM: MORNING

TIME	SENIOR PREPARATORY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	STENOGRAPHY
8:30	General History (T. W. Th. F.) <i>myers</i>		Spanish Latin	Calculus	Geology	Stenography
9:25	English (M. T. W. Th.) <i>Matthews</i>	Plane Geometry	Physics	Mechanism (T. W. Th. F.) Stock Feeding		Commercial Spanish
10:20	Horticulture (F.)	Spanish ✓ Latin ✓ Greenhouse Construction (M. Th.) Live Stock & Scorecard (W. F.)	Physics (T.) Sewing (M. W. Th. F.)	Cooking (M. T. W. Th.) Astronomy (F.) Pomology (T.)	History of Civilization Hydraulics	Advanced Stenography (F.)
11:15	Horticulture (M. W. F.) Freehand Drawing (T. Th.)	English	Soils & Crops (M. W. F.) Principles of Breeding (T. Th.) Descriptive Geometry	Cooking (M. T. W. Th.) English (F.) Pomology (T.)	English (T. Th.)	

## PROGRAM OF RECITATIONS

## SECOND TERM: AFTERNOON

TIME	SENIOR PREPARATORY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	STENOGRAPHY
1:10	Algebra <i>Melius</i> <i>Higdon</i>	Biology	English	Political Economy (T. W. Th. F.) Strength of Materials	Plant Breeding (T. Th.) Rural Economy (M. W. F.) Metallurgy (T. W. Th. F.) Home Sanitation (T. Th.) Dressmaking (W.)	
2:05	Carpentry (T. Th.) Cooking (T. Th.) Sewing (M. F.)	Biology Mechanical Drawing (T. Th.) Iron and Steel Forging (M. W.)	Surveying (M. W.) Topog. Draw- ing (Th.) Mechanical Drawing (T. Th.) Cooking (M. W. F.)	Chemistry	Machine Shop (M. W.) Engine and Boiler Tests (T. Th.) Dressmaking (W.) Agricultural Chem- istry (M. W. F.)	Stenography
3:00	Carpentry (T. Th.) Cooking (T. Th.)	Greenhouse Handicraft (T.) Mechanical Drawing (T. Th.) Iron and Steel Forging (M. W.)	Surveying (M. W. F.) Topog. Draw- ing (Th.) Mechanical Drawing (T. Th.) Cooking (M. W. F.)	Chemistry	Machine Shop (M. W.) Engine and Boiler Tests (T. Th.) Agricultural Chem- istry (M. W. F.)	Spanish Steno- graphy
3:55	Carpentry (T. Th.)	Iron and Steel Forging (M. W.) Greenhouse Handicraft (T.)	Surveying (M. W.)		Machine Shop (M. W.)	



PROGRAM OF RECITATIONS

THIRD TERM: MORNING

TIME	SENIOR PREPARATORY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	STENOGRAPHY
8:30	Elementary Chemistry (T. W. Th. F.) <i>Williams</i> <i>Introduction</i>	English <i>where</i> <i>Instruction</i>	Spanish Latin & Crops (M. T. W. Th.)	Calculus Pomology (F.)	Geology Electric Engineer ing	Stenography
9:25	English (M. T. W. Th.) <i>Mattino</i>	Solid Geometry	Physics Forestry (M. W.)	Steam Boilers Physiology Landscape Gardening (T. Th) Pomology (F.)	Practical Agriculture	Commercial Spanish
10:30	Live Stock and Score card (M. W. F.) Cooking (T.)	Spanish Latin Live Stock & Scorecard (T. Th.) Horticulture (M. F.)	Physics (W.) Sewing (M. T. Th. F.)	Cooking and Serving (M. W. F.) Plant Physiology (M. W. Th. F.) English (T.) Astronomy (Th.)	Analytic Mechanics	Advanced Stenography (F.)
11:15	Cooking (T.) Sewing (W. F.)		Higher Algebra Olericulture (M. W. F.) Bacteriology (T. Th.)	Cooking and Serving (M. W. F.) Plant Physiology (F.) Kitchen Gardening (T. Th.)	Chemistry of Foods (M. W. F.) English (T. Th.)	Office Practice

## PROGRAM OF RECITATIONS

## THIRD TERM: AFTERNOON

TIME	SENIOR PREPARATORY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	STENOGRAPHY
1:10	Algebra <i>Melvin H. Hight</i>	Biology	English	Engineering Structures		
2:05		Biology Bench Work in Wood (M. W.) Mechanical Drawing (T. Th.)	Soil Physics (T. W. Th. F.) Foundry Prac- tice (M. W.) Machine De- sign (T. Th.) Cooking (Th.)	Chemistry (T. W. Th. F.) Kitchen Gardening (M.)	Roofs and Bridges (T. Th.) Agricultural Chem- istry (M. W. F.) Chafing-dish Cook- ery (T.) Dressmaking (Th.)	Stenography
3:00	Botany (M. T. W. Th.) Hygiene (F.)	Horticulture (W.) Bench Work in Wood (M. W.) Mechanical Drawing (T. Th.)	Gen'l History Foundry Prac- tice (M. W.) Machine De- sign (T. Th.) Soil Physics (T. W. Th. F.) Cooking (Th.)	Chemistry (T. W. Th. F.) Kitchen Gardening (M.)	Roofs and Bridges (T. Th.) Agricultural Chem- istry (M. W. F.) Chafing-dish Cook- ery (T.) Dressmaking (Th.)	Spanish Stenography
3:55		Bench Work in Wood (M. W.) Horticult. (W.)	Foundry Prac- tice (M. W.)			

Miss Ford has had one  
year of Latin. The course  
has been changed, so  
this catalog does not  
show it.

C. A. Baker, D.









63aH  
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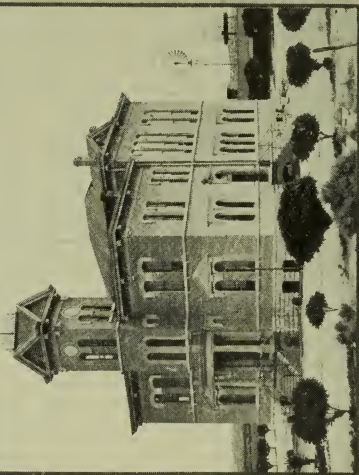
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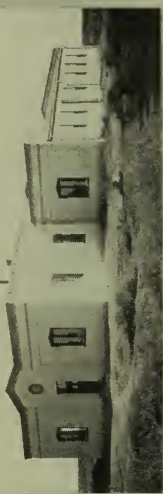




THE MAIN  
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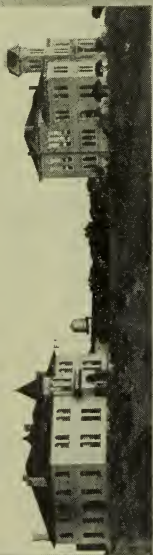
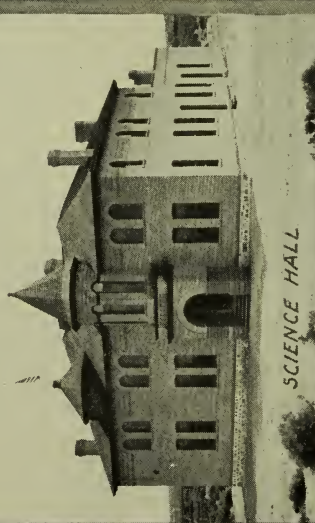


MECHANICAL  
BUILDING



## COLLEGE BUILDINGS

SCIENCE HALL





THIRTEENTH ANNUAL REGISTER

---

New Mexico College

OF

Agriculture and Mechanic Arts

MESILLA PARK

---

Catalogue of Students for 1902-1903

AND

Announcements for 1903-1904

---

SANTA FE, N. M.:  
NEW MEXICAN PRINTING COMPANY  
1903.



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### CALENDAR FOR 1903-1904.

September	7-8, 1903, Examination of candidates for admission and re-examination of deficient students.
"	7-8-9, 1903, Matriculation of students.
"	9-10, 1903, Assignment of students to classes and assignment of work by class instructors.
"	11, 1903, Regular class work of first term begins.
November	20, 1903, Recitations of first term end.
"	23-25, 1903, Examination of classes for first term's work.
"	26, 1903, Thanksgiving holiday.
"	30, 1903, Assignment of students to classes for second term and assignment of work by class instructors.
December	1, 1903, Regular class work of second term begins.
"	19, 1903, Christmas vacation begins.
January	3, 1904, Christmas vacation ends.
February	22, 1904, Washington's Birthday—holiday.
"	26, 1904, Recitations of second term end.
Feb. 29, March	1-2, 1904, Examination for second term's work.
March	7, 1904, Assignment of students to classes for third term and assignment of work by class instructors.
"	8, 1904, Regular class work of third term begins.
May	6, 1904, Field Day.
"	24, 1904, Recitations of third term end.
"	25-26-27, 1904, Examination for third term's work; Senior vacation.
"	29, 1904, Baccalaureate Sermon.
"	30, 1904, Memorial Day—holiday.
"	30, 1904, P. M., Address to Columbian Literary Society.
"	31, 1904, Alumni meeting.
June	1, 1904, Commencement exercises.

### **BOARD OF REGENTS.**

Granville A. Richardson, President, Roswell, N. M.

H. B. Holt, Secretary and Treasurer, Las Cruces, N. M.

Seaman Field, Deming, N. M.

W. A. Cooper, Santa Fe, N. M.

José Lucero, Las Cruces, N. M.

### **Advisory Members.**

Hon. Miguel A. Otero, Governor of New Mexico, Santa Fe,  
N. M.

Hon. J. Francisco Chaves, Supt. of Pub. Instruction, Santa  
Fe, N. M.

## FACULTY.

LUTHER FOSTER, B. S., Iowa State College, 1872 ; M. S. Agr.,  
ibid., 1888. President and Professor of Political  
Economy.

CLARENCE T. HAGERTY, B. S., Notre Dame University, 1890 ;  
M. S., ibid., 1895. Professor of Mathematics and  
Astronomy.

\* ARTHUR GOSS, B. S., Purdue University, 1888 ; A. C.,  
ibid., 1889 ; M. S., ibid., 1895. Professor of Chemistry.

HIRAM HADLEY, A. M., Earlham College, 1885. Professor of  
History and Philosophy.

ELMER O. WOOTON, B. S., Earlham College, 1889 ; A. M.,  
ibid., 1896. Professor of Biology, and in charge of  
Geology.

FRANCIS E. LESTER, Registrar and Principal of the Depart-  
ment of Stenography.

JOHN DABNEY TINSLEY, B. S., New Mexico Coll. of Agr.  
and Mech. Arts, 1890. Professor of Physics.

ALICE HORNING, B. S., Agricultural College of Oregon, 1882.  
Professor of Domestic Science, Dean of Women, and  
Matron of the Women's Hall.

JOHN J. VERNON, B. Agr., Iowa State College, 1897 ; M. S.  
A, ibid., 1900. Professor of Agriculture and Horti-  
culture and Superintendent of Grounds.

D. M. RICHARDS, A. B., Oberlin College, Principal of the  
Preparatory Department.

EDITH DAVIS, B. A., University of Kansas, 1897. Professor  
of English.

CHARLES MILLS, Professor of Mechanical Engineering.

MERRITT LORRAINE HOBLIT, A. B., Kalamazoo College, 1901 ;  
A. B., University of Chicago, 1901. Professor of Span-  
ish and Latin.

ALFRED S. FROST, Colonel U. S. Army, graduate of the Gen-

\* Resigned, April, 1903.

\* Professor Raleigh F. Hare was elected to fill the vacancy created by  
the resignation of Professor Arthur Goss, June 2nd, 1903.



eral Service and Staff College, Fort Leavenworth, 1891. Professor of Military Science and Tactics.

RALEIGH FREDERICK HARE, B. S., Alabama Polytechnic Institute, 1892; M. S., *ibid.*, 1893. Assistant Professor of Chemistry.

FABIAN GARCIA, B. S., New Mexico Coll. of Agr. and Mech. Arts, 1894. Assistant Professor of Horticulture.

### Other Officers of Instruction.

GERALDINE COMBS, Assistant in Preparatory Department.

ARCHIE BRUCE SAGE, B. S., New Mexico Coll. of Agr. and Mech. Arts, 1900. Assistant Professor in Mechanical Engineering Department.

CHARLOTTE A. BAKER, Librarian and Assistant in English.

FRANCES ELIZABETH BLAKESLEY, B. L., Washburn College, 1895. Assistant in the Preparatory Department.

JOHN OLIVER MILLER, B. S., University of Colorado, 1899. Assistant to the Registrar and in the Department of Stenography and Typewriting.

ELIZABETH E. SHIMER, Assistant in the Preparatory Department.

CLARA LOUISE FOSTER, B. S., Utah Agr. College, 1897. Assistant in Domestic Science.

JAMES STANISLAUS MACGREGOR, B. S., New Mexico Coll. of Agr. and Mech. Arts, 1902. Assistant in Mechanical Engineering Department.

PINCKNEY FORD; Assistant in the Department of Stenography and College Stenographer.

CHARLES L. POST, M. S., New Mexico Coll. of Agr. and Mech. Arts, 1901. Assistant in the Department of Chemistry.

HARRY CRANE McLALLEN, B. S. A., Cornell University, 1898; M. S. A., *ibid.*, 1901. Assistant in Agriculture.

## FACULTY COMMITTEES.

### Course of Study.

Clarence T. Hagerty, *Chairman*.

E. O. Wooton.

Chas. Mills.

D. M. Richards.

Alice Horning.

J. J. Vernon.

### Catalogue.

E. O. Wooton, *Chairman*.

M. L. Hoblit.

D. M. Richards.

### Judiciary.

H. Hadley, *Chairman*.

C. T. Hagerty.

A. S. Frost.

### Buildings and Grounds.

Chas. Mills, *Chairman*.

J. J. Vernon.

F. Garcia.

### Entertainment.

Alice Horning, *Chairman*.

F. Garcia.

Edith Davis.

### Extension Work and Advertising.

F. E. Lester, *Chairman*.

M. L. Hoblit.

J. D. Tinsley.

### Student Conference.

D. M. Richards, *Chairman*.

Alice Horning.

H. Hadley.

### Boarding.

R. F. Hare, *Chairman*.

F. E. Lester.

Alice Horning.

### Library.

J. D. Tinsley, *Chairman*.

Edith Davis.

E. O. Wooton.

Miss Baker, *ex-officio*.

### Athletics.

J. J. Vernon, *Chairman*.

J. D. Tinsley.

A. S. Frost.

NOTE: The president is ex-officio a member of all committees.

## GENERAL STATEMENT.

### Location.

The New Mexico College of Agriculture and Mechanic Arts is located at Mesilla Park, Doña Ana County. Mesilla Park is situated about the middle of the Mesilla Valley on the main line of the Santa Fe Railway connecting Albuquerque and El Paso, Texas, about 40 miles from the latter city. Two miles and a half north of the college is the town of Las Cruces, with a population of about 4,000 souls. Here may be found a public school, two mission schools, and a Catholic academy for girls; while Presbyterians, Methodists, Baptists and Roman Catholics hold regular church services, to which students are always welcome. At Mesilla Park there is a public school, which fits students for entrance to the Preparatory Department of the College, and the Episcopalians hold regular services here, in their newly completed chapel.

### Origin.

The New Mexico College of Agriculture and Mechanic Arts, under a slightly different name, was established by an act of the Twenty-eighth Assembly of New Mexico, approved February 28, 1889. The purpose of the institution is defined in Section 19 of this act:

“The Agricultural College created and established by this act shall be non-sectarian in character, and devoted to practical instruction in agriculture, mechanic arts, natural sciences connected therewith, as well as a thorough course of instruction in all branches of learning bearing upon agriculture and other industrial pursuits.”

The branches in which instruction may be given are set forth as follows in Section 20 of the same act:

“The course of instruction of the College hereby created shall embrace the English language, literature, mathematics, philosophy, civil engineering, chemistry, animal and vegeta-

ble anatomy and physiology, the veterinary art, entomology, geology, and political, rural, and household economy, horticulture, moral philosophy, history, mechanics, and such other sciences and courses of instruction as shall be prescribed by the regents of this institution of learning."

By Section 25 of the same act, the assent of the Legislative Assembly was given to the establishment of Experiment Stations within the Territory of New Mexico in connection with the Agricultural College, in pursuance of the act of Congress approved March 2, 1887;—the Hatch Act.

#### Income.

The revenues of this College are derived from the following sources:—

1. Students' fees.
2. Sale of farm products.
3. Territorial tax and special appropriations.
4. The United States, under Congressional Act, of August 30, 1890—the Morrill fund.
5. The United States, under Congressional Act of March 2, 1887—the Hatch fund.

The money received from fees and farm products has, so far, been very limited, and has been applied to the payment of such expenses as are not provided for by either act of Congress.

The Territorial Act creating the institution provided for an annual levy of one-fifth of a mill, commencing with the year 1889. The Thirty-Fifth Legislative Assembly increased the rate to two-fifths of a mill, and the levy will hereafter yield an annual income of \$13,000.

The Morrill Fund was created by the United States law of August 30, 1890, "for the more complete endowment and support of the Colleges of Agriculture and Mechanic Arts in the several States and Territories." It is paid over to them before July 31, of each year. The College received this fund first in 1890, to the amount of \$15,000. Henceforth the fund will amount to \$25,000. This fund can be applied *only* "to in-

struction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic sciences, with special reference to their application in the industries of life, and to the facilities for such instruction." *No part of this fund may be used for building or repairs, or for ordinary running expenses, such as salaries of administrative officers,—as president, clerk, librarian, etc.,—equipment of the library, and ordinary furniture, stationery, printing, etc., or for teaching any subject not referred to in this Act.* The theory of the federal government in accordance with which these appropriations have been made, is that the State or Territory must provide the buildings and grounds and keep them in repair and must also provide for all the general administrative expenses of the college, and that the federal appropriation is to be used only for the purposes of paying teachers and supplying the necessary books and apparatus for teaching the specific subjects mentioned in the Act.

By the United States law of March 2, 1887, the *Hatch Act*, appropriations are made for the maintenance of Experiment Stations in connection with Agricultural Colleges in the several States and Territories. For the support of each station there is set apart the sum of \$15,000 a year, payable quarterly. This money must be used for "paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results." Bulletins showing progress must be printed each quarter, and be sent to each newspaper in the Territory and to all farmers who apply for them. This fund first became available for this College in 1889-90, to the amount of \$10,000. Since July 1, 1890, \$15,000 a year has been received. *After the first year, only five per cent. of this fund may be used to erect, enlarge or repair buildings for the use of the Experiment Station; and no part of it may be applied to the expenses of instruction or to general college purposes. It must be applied exclusively to the carrying on of agricultural experiments and to the dissemination of the results thereof.*

**Endowment.**

By an Act of Congress, approved June 21, 1898, this College was given 100,000 acres of public land, the proceeds of which are to form a permanent endowment fund. This land has all been located, a small portion has been leased, and the remainder will be either leased or sold as soon as possible. The institution is now receiving a small income from this source.

**Requirements for Admission.**

Candidates for admission to the *Freshman* year will be admitted without examination upon completion of the subjects of the Senior Preparatory year, or on a certificate showing that the same or an equivalent amount of work has been completed at any of the following High Schools.

Albuquerque High School.

Deming High School.

El Paso High School.

Las Vegas High School.

Raton High School.

Roswell High School.

Gallup High School.

Other candidates must pass examinations in the following subjects.

*English*.—Lockwood's Lessons in English, or its equivalent. No applicant will be admitted who is unable to write English fairly correct in spelling, punctuation, paragraphing, etc., and free from gross grammatical and rhetorical errors. Some knowledge of literature is also required.

*General History*.—Myer's General History or Sheldon's General History or their equivalent.

*Algebra*.—Milne's Academic Algebra through logarithms, or its equivalent.

*Physics*.—Shaw's Physics by Experiment, or its equivalent.

*Physical Geography*.—Maury's Physical Geography, or its equivalent.



*Physiology*.—Martin's Human body (briefer course), or its equivalent.

*Civil Government*.—McCleary's Studies in Civics, or its equivalent.

*Free Hand Drawing*.—At least a year's thorough work.

*Arithmetic*.—White's Complete Arithmetic or its equivalent.

*History of the United States*.—Fiske's School History or Barnes' Brief History of the United States, or their equivalent.

*Geography*.—Maury's Manual of Geography or its equivalent.

Student's coming from other colleges whose requirements for admission are substantially equivalent to those of this college may be admitted to corresponding classes here, provided they bring certificates showing amount of work completed. Other candidates for advanced standing will be examined in the subjects prescribed for admission, and also in the undergraduate studies with which they desire to be credited.

All applicants for admission must furnish satisfactory evidence of good moral character. The President and Faculty reserve the right to reject students who appear to be too immature to live away from home.

**COURSES OF STUDY.**  
**THE COLLEGIATE COURSES OF STUDY ARE AS FOLLOWS.**  
**Freshmen Year.**

AGRICULTURE	MECHANICAL ENGINEERING	DOMESTIC SCIENCE	GENERAL
FIRST TERM			
*1 Mathematics (Geom. Pl.), 5. 1 English, 5. 1 Zootechny (Livestock), 2. 1 Biology (Zool.), 2+6P. 1 Horticulture (Greenhouse), 2. 3 Horticulture (Greenhouse), 2P.	1 Mathematics (Geom. Pl.), 5. 1 English, 5. 1 Spanish or 1 Latin, 5. 27 Mech. Engin. (Woodturning), 6P. 1 Mechan. Eng. (Drawing), 4 P.	1 Mathematics (Geom. Pl.), 5. 1 English, 5. 1 Spanish or 1 Latin, 5. 1 Biology (Zool.), 2+6 P.	
SECOND TERM			
2 Mathematics (Geom. Pl.), 5. 2 English, 5. 2 Zootechny (Livestock), 2+2P. 2 Biology (Zool.), 2+6 P. 2 Horticulture (Greenhouse), 1. 4 Horticulture (Greenhouse), 2 P.	2 Mathematics (Geom. Pl.), 5. 2 English, 5. 2 Spanish or 2 Latin, 5. 20 Mech. Engin. (Forging), 10P.	2 Mathematics (Geom. Pl.), 5. 2 English, 5. 2 Spanish or 2 Latin, 5. 2 Biology (Zool.), 2+ P.	
THIRD TERM			
3 Mathematics (Geom. Sol.), 5. 4 English, 5. 3 Zootechny (Livestock), 2. 3 Biology (Botany), 2+6 P. 3 Horticulture, 2+3 P.	3 Mathematics (Geom. Sol.), 5. 3 English, 5. 3 Spanish or 3 Latin, 5. 21 Mech. Eng. (Woodwork), 6P. 2 Mech. Eng. (Drawing), 4 P.	3 Mathematics (Geom. Sol.), 5. 3 English, 5. 3 Spanish or 3 Latin, 5. 3 Biology (Botany), 2+6 P.	

\* The number or letter preceding the subject is the number by which each course is referred to in the college records. The number following each subject indicates the number of hours per week devoted to the subject. P indicates any kind of laboratory or other practice work, two hours of which is accepted as the equivalent of one hour of recitation or lecture work.

NOTICE. — Military Tactics is required of all male students of the institution except Seniors and Graduate Students, four hours per week throughout the year.

## Sophomore Year.

AGRICULTURE	MECHANICAL ENGINEERING	DOMESTIC SCIENCE	GENERAL
FIRST TERM			
4 Mathematics (Trig.), 5. 4 English, 5. 1 Physics, 4+2 P. 1 Spanish or 1 Latin, 5.	4 Mathematics (Trig.), 5. 4 English, 5. 1 Physics, 4+2 P. 22 Mech. Engin. (Pattern Mak.), 10 P.	4 Mathematics (Trig.), 5. 4 English, 5. 1 Physics, 4+2 P. 4 Spanish or 4 Latin, 5.	4 Mathematics (Trig.), 5. 4 English, 5. 1 Physics, 4+2 P. 4 Spanish or 4 Latin, 5.
SECOND TERM			
1 Agronomy (Soils and Crops), 2. 4 Zootechny (Prin. of Breed.), 3. 2 Physics, 4+2 P. 2 Spanish or 2 Latin, 5. 1 Surveying, 1+6 P. 2 Surveying, (Topog. Draw.), 2 P.	5 English, 5. 2 Physics, 4+2 P. 7 Mech. Engin. (Desc. Geom.), 5. 1 Surveying, 1+6 P. 3 Mech. Engin. (Draw.), 4 P.	5 English, 5. 2 Physics, 4+2 P. 5 Spanish or 5 Latin, 5. 1 Domestic Science (Cooking), 6 P. 2 Domestic Science (Sewing), 4 P.	5 English, 5. 2 Physics, 4+2 P. 5 Spanish or 5 Latin, 5. 1 Surveying, 1+6 P. 2 Surveying (Topog. Draw.), 2 P.
THIRD TERM			
2 Agronomy (Soils and Crops), 4. 6 Horticulture (Forestry), 2. 3 Spanish or 3 Latin, 5. 7 Horticulture (Olericulture), 2+2 P. 1 Soil Physics, 8 P. 4 Biology (Bacteriol.), 2.	6 English, 5. 3 Physics, 4+2 P. 5 Mathematics (High. Alg.), 5. 23 Mech. Engin. (Foundry), 6 P. 4 Mech. Engin. (Machine Design), 4 P.	6 English, 5. 3 Physics, 4+2 P. 6 Spanish or 6 Latin, 5. 4 Biology (Bacteriol.), 2. 2 Domestic Science (Cooking), 2 P. 4 Domestic Science (Sewing), 4 P.	6 English, 5. 3 Physics, 4+2 P. 6 Spanish or 6 Latin, 5. 1 History (Med. and Mod.), 5.

## Junior Year.

AGRICULTURE	MECHANICAL ENGINEERING	DOMESTIC SCIENCE	GENERAL
FIRST TERM			
7 English, 1. 1 Chemistry, 5. 8 Horticulture (Pomology), 5. 11 Horticulture (Entomol.), 2. 1 Meteorology, 2. Elective, 5.	7 English, 1. 1 Chemistry, 5. 6 Mathematics (Anal. Geom.), 5. 8 Mech. Engin. (Elem. Mech.), 4 24 Mech. Eng. (Iron work), 6 P. 5 Mech. Engin. (Machine Design), 4 P.	7 English, 1. 1 Chemistry, 5. 1 Astronomy, 5+2 P. 5 Domestic Science (Canning, etc.), 6 P. 14 Horticulture (Floriculture), 1+2 P. Elective, 3.	7 English, 1. 1 Chemistry, 5. 1 Astronomy, 5+2 P. Elective, 8.
SECOND TERM			
8 English, 1. 2 Chemistry, 10 P. 1 Political Economy, 4. 5 Zootechny (Feeding), 5. 9 Horticulture (Pomology), 2 P. Elective, 5.	8 English, 1. 2 Chemistry, 10 P. 7 Mathematics (Calculus), 5. 10 Mech. Engin. (Str. of Mater.), 5. 1 Political Economy, 4.	8 English, 1. 2 Chemistry, 10 P. 1 Political Economy, 4. 2 Astronomy, 1+2 P. 6 Domestic Science (Cooking), 8 P. Elective, 4.	8 English, 1. 2 Chemistry, 10 P. 1 Political Economy, 4. 2 Astronomy, 1+2 P. Elective, 8.
THIRD TERM			
9 English, 1. 3 Chemistry, 8 P. 5 Biology (Plant Phys.), 3+2 P. 10 Horticulture (Pomology), 2 P. 12 Horticulture (Landsc. Gard.), 2. Elective, 8.	9 English, 1. 3 Chemistry, 8 P. 8 Mathematics (Calculus), 5. 12 Mech. Engin. (Steam Boilers), 5. 9 Mech. Eng. (Mechanism), 4.	9 English, 1. 3 Chemistry, 8 P. 6 Biology (Physiol.), 5. 3 Astronomy, 1+2 P. 7 Domestic Science (Invalid Cook.), 6 P. 7 Horticulture (Olericulture), 2+2 P. Elective, 2.	9 English, 1. 3 Chemistry, 8 P. 6 Biology (Physiol.), 5. 3 Astronomy, 1+2 P. Elective, 8.

Senior Year.

AGRICULTURE	MECHANICAL ENGINEERING	DOMESTIC SCIENCE	GENERAL
FIRST TERM			
10 English, 2. 4 Chemistry (Agr. Chem.), 3. 3 Agronomy (Rural Engin.), 2+2 P. 6 Zootechny (Dairying), 3+4 P. Elective, 7.	10 English, 2. 1 Mineralogy, 10 P. 13 Mech. Engin. (Steam Eng.), 4. 25 Mech. Engin. (Mach. Shop), 4 P. 6 Mech. Engin. (Machine Design), 4 P. 11 Mech. Engin. (Eng Struct.), 5.	10 English, 2. 1 Mineralogy, 10 P. 1 Philosophy (Psychol.), 5. 8 Domestic Science (Dietetics), 2. 9 Domestic Science (Dress making), 2 P. Elective, 5.	10 English, 2. 1 Mineralogy, 10 P. 1 Philosophy (Psychol.), 5. Elective, 8.
SECOND TERM			
11 English, 2. 1 Geology, 5. 5 Chemistry (Agr. Chem.), 6 P. 4 Agronomy (Rural Econ.), 3. 13 Horticulture (Plant Breeding), 2. Elective, 5.	11 English, 2. 1 Geology, 5. 1 Metallurgy, 4. 15 Mech. Engin. (E. and B. Tests), 4 P. 26 Mech. Engin. (Mach. Shop), 6 P. 14 Mech. Engin. (Hydraulics), 5.	11 English, 2. 1 Geology, 5. 2 History (Hist. Civiliz.), 5. 10 Domestic Science (H. Sanitation), 2. 11 Domestic Science (Dress making), 2 P. Elective, 5.	11 English, 2. 1 Geology, 5. 2 History (Hist. Civiliz.), 5. Elective, 8.
THIRD TERM			
12 English, 2. 5 Agronomy (Pract. Agr.), 5. 6 Chemistry (Agr. Chem.), 6 P. Thesis, 5. Elective, 5.	12 English, 2. 16 Mech. Engin. (Anal. Mech.), 5. 17 Mech. Engin. (Elect. Eng.), 5. 18 Mech. Engin. (Machine Design), 4 P. Thesis, 6.	12 English, 2. 12 Domestic Science (Chem. of Foods), 3. 13 Domestic Science (Chafing dish), 2 P. 14 Domestic Science (Dress-making), 2 P. Thesis, 5. Elective, 8.	12 English, 2. 2 Geology, 5. Thesis, 5. Elective, 8.

## Electives \*

FIRST TERM	SECOND TERM	THIRD TERM
Adv. Chemistry, 6 P. Adv. Physics, 6 P. Adv. Botany, 6 P. Adv. Soil Physics, 6 P. Adv. Zoology, 4 P. Domestic Science, 4 P. Commercial Spanish, 5. English History, 5. Agronomy, 6 P. Zootechny, 6 P. Dairying, 6 P. Horticulture, 6 P. Commercial Arithmetic, 5. Music, 5 P.	Adv. Chemistry, 6 P. Adv. Physics, 6 P. Adv. Botany, 6 P. Adv. Soil Physics, 6 P. Adv. Zoology, 4 P. Domestic Science, 4 P. Commercial Spanish, 5. English History, 5. Applied Psychology, 5. Bookkeeping, 5. Agronomy, 6 P. Zootechny, 6 P. Dairying, 6 P. Horticulture, 6 P. Music, 5 P.	Adv. Chemistry, 6 P. Adv. Physics, 6 P. Adv. Botany, 6 P. Adv. Soil Physics, 6 P. Adv. Zoology, 4 P. Domestic Science, 4. Commercial Spanish, 5. Adv. Am. History, 5. Theory and Practice of Teaching, 5. Bookkeeping, 5. Agronomy, 6 P. Zootechny, 6 P. Dairying, 6 P. Horticulture, 6 P. Music, 5 P.

\* NOTE ON ELECTIVE STUDIES.—The figures following the Elective Studies indicate the minimum amount of time that may be devoted to them. Whenever the other work of the students and of the instructor do not prevent, a greater amount of time may be given to the subject.

The Elective Studies are not assigned to any particular year, but may be taken whenever the student is prepared for them, and has the necessary time at his disposal, subject always to the approval of the faculty.

In addition to the courses expressly designated as Elective Studies, any study pursued in the College, and not prescribed in the course of study that is being followed by the student in question, may be elected by him. A student in the General Course, for example, may elect a study prescribed for Agricultural students; or to give a more specific example, a Senior in the Engineering Course (who has four hours free for an elective in the second term) may elect Political Economy, which is given in the Junior year of the General and Agricultural courses, provided it is given at an hour at which he is free from other engagements.

## Senior Preparatory Year. †

FIRST TERM	SECOND TERM	THIRD TERM
C English, 4. C Mathematics (Algebra), 5. B History (Grecian etc.), 4. A Agronomy (Elementary), 3 or B Horticulture (Floriculture), 2+2 P. B Mech. Engin. (Drawing), 2 P. D Mechan. Engin. (Carpentry), 6 P or G Domestic Science, 4 P and E Domestic Science, 4 P.	B English, 4. B Mathematics (Algebra), 5. A History (Roman etc.), 4. A Horticulture (Elementary), 2+2 P. A Mech. Engin. (Drawing), 2 P. C Mech. Engin. (Carpentry), 6 P or F Domestic Science, 4 P and D Domestic Science, 4 P.	A English, 4. A Mathematics (Algebra), 5. A Chemistry, 4. A Biology (Botany), 4. A Zootechny (Live stock), 3 or A Domestic Science, 1 and B Domestic Science, 2 P and C Domestic Science, 2 P.

† NOTE.—The Senior Preparatory Classes are taught by the College instructors, not by the teachers of the Preparatory Department, and the students are under the immediate jurisdiction of the College Faculty, instead of under that of the principal of the Preparatory Department.



### THE ELECTIVE SYSTEM.

By consulting the courses of study offered by this institution (pp. 14-17) it will be seen that there are four courses outlined, three of which are of a more or less specialized character. Each of these latter is designed to fit the student for some special line of work, which he has decided to follow before entering the course. Besides their strictly technical subjects, they contain all those general educational and cultural subjects that are considered to be of most value to technical students, and which it was possible to introduce into these courses. This arrangement allows very little selection of work upon the part of the student, except that made when entering his particular course. Mechanical engineers have no choice of work. Agricultural men may elect a second year of language and a small number of other cultural subjects or more technical work, if they so desire. The domestic science course allows a certain amount of election which may be turned either to cultural work or to further technical work in that department.

The general course, however, is designed to include, as required work, all those subjects which are necessary in any general course, and at the same time allow the student to select a large proportion of his work. The facilities offered and the time allowed are so arranged that a student may specialize in language (Spanish, Latin, or English), literature (English or American), history, psychology, pedagogy, chemistry, physics, or biology, or may take a certain amount of technical training in agriculture, horticulture, mechanical engineering, or domestic science. With this arrangement a student, by entering the general course, may take any special course of his own choosing, which the institution is able to furnish.

#### Special Courses.

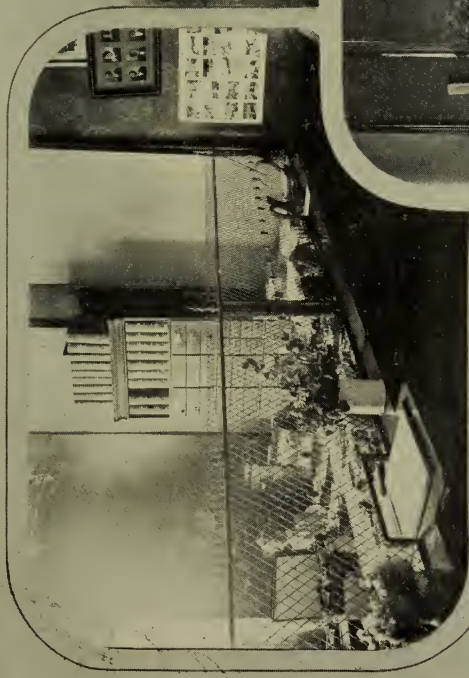
Students of mature years, who cannot remain long enough to take a full course, may be allowed to take special courses. The faculty reserves the right to refuse such requests, or to order such modifications as may seem best for the student

and the college. No degrees are granted for special work, but those who perform such work in a satisfactory manner will receive certificates.

### Degrees.

The degree of *Bachelor of Science (B. S.)* is conferred upon students who satisfactorily complete the work prescribed in any of the collegiate courses of study, but in order to receive the B. S. degree students are required to spend at least one year, immediately before graduation, in this institution.

The degree of *Master of Science (M. S.)* is conferred upon students of this institution who after taking the degree of B. S. pursue for at least one year, or for two years as non-resident students, a course of study approved by the faculty, pass an examination on the same, and present a satisfactory thesis. Students of other institutions of similar character and equal rank, holding the bachelor's degree, desiring to take the M. S. degree from this institution are required to pursue here for at least one year, a course of study approved by the faculty, pass an examination on the same and present a satisfactory thesis.



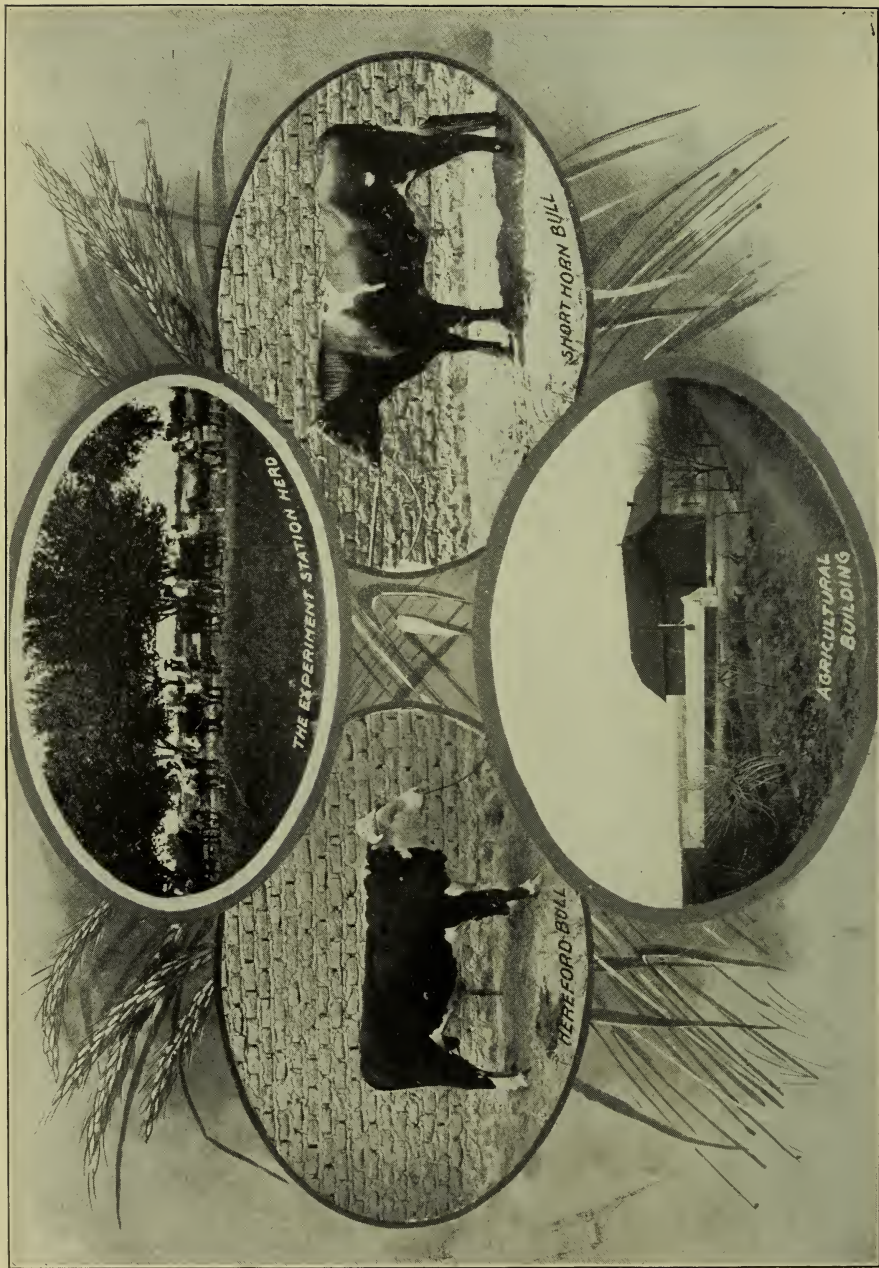
REGISTRARS OFFICE



PRESIDENT'S OFFICE







THE EXPERIMENT STATION HERD

HEREFORD BULL

AGRICULTURAL BUILDING

SHORT HORN BULL

## DEARTMENTS OF INSTRUCTION.

### AGRICULTURE AND HORTICULTURE.

PROFESSOR VERNON

ASSISTANT PROFESSOR GARCIA

MR. MCLALLEN

The course in agriculture is designed to combine, in their proper proportions, that amount of theoretical study with practical training illustrative of the theory learned, which will produce a well rounded, practical, resourceful man. To this end the course is strong in those sciences, botany and chemistry in their various branches, which form important aids to applied agriculture. A certain number of other subjects of educational and practical value are included, notably the study of the Spanish language, proficiency in which opens a new field for the scientist among Spanish speaking peoples. To all this is added a large amount of practical work under competent instruction and with a modern equipment, while a certain amount of choice is allowed in the selection of the studies of the last two years. The instruction is given by text books, lectures, laboratory practice and field observation.

This course fits young men for the various agricultural pursuits: farming, stockraising, dairying, fruit growing, nursery business, floriculture and market gardening. It also prepares them for professorships of Agriculture, Horticulture and Animal Husbandry in agricultural colleges, as well as for scientific aids in the United States Department of Agriculture. The demand for trained men in these latter positions has been so great, that, in recent years, almost all agricultural graduates have been called into college or experiment station work.

#### **Agronomy, or Plant Culture.**

A. *Elementary Agriculture.* Introductory principles. The work will be general and of a popular nature. Principles of

Agriculture by Bailey will be used as a text, supplemented by lectures.

Required of all Senior Preparatory men, first term, 3 hours.

1, 2. *Soils and Field Crops*. Preparation of the soil, plant growth, selection of seed, germination under irrigation systems, cultivation, harvesting, storage, marketing.

Morrow and Hunt's *Soils and Crops of the Farm*, King's *The Soil*, and Roberts' *The Fertility of the Land* form the basis for the work.

Required of Agricultural Sophomores, second term, 2 hours, and third term, 4 hours. Credit 72 hours.

3. *Rural Engineering*. Planning ditch systems, application of water to land, economic use of fields and crops, buildings and machinery.

Required of Agricultural Seniors, first term, 2 hours plus 2 hours practice. Credit 36 hours.

4. *Rural Economics*. History of Agriculture, farm management, and rural law.

Required of Agricultural Seniors, second term, 3 hours. Credit 36 hours.

5. *Practical Agriculture*. Scientific and practical problems in general agriculture as applied to the farm and ranch. Special effort is made to apply the principles discussed to New Mexico agriculture.

Required of Agricultural Seniors, third term, 5 hours. Credit 60 hours.

### **Zootechny, or Animal Industry.**

This course aims to meet the growing needs of the territory, inasmuch as stock raising is one of the leading industries. The subjects are pursued from a practical and scientific standpoint, having in view the thorough equipment of young men for successful work in breeding, care, and management of large herds.

A. *Live Stock and Score-card*. Breeds of animals; cattle, horses, sheep and swine. A preliminary study with score-card practice.

Required of all male Senior Preparatory students, third term, 3 hours.



1, 2, 3. *Live Stock.* This course includes a study of the history, development, characteristics, selection, care and management, points of utility, etc., of the different breeds of cattle, horses, sheep and swine. Special attention is given to a discussion of the breeds best adapted to New Mexico conditions. The subject matter of the text is supplemented by lectures. Throughout the course in live stock practical demonstration of the various points under discussion is made with individual animals of the college herd; also, occasional trips will be planned having in mind a study of the breeds, methods of handling, and local conditions of the various herds in this section.

Score-card practice is coincident with the study of breeds. Animals are brought before the class for demonstration and scoring. Lovelock's American Standard of Excellence, and other recognized standards will be followed in judging cattle, sheep and swine.

The object of the study is to insure a familiarity with the characteristics of the leading breeds, so that students are enabled to become competent judges of live stock. This work is specially valuable for young men who expect in any way to deal with the live stock interests of the territory.

Required of Agricultural Freshmen, 2 hours first term, 3 hours second term and 2 hours third term. Credit 84 hours.

4. *Principles of Breeding.* This course covers the laws governing the breeding of animals, and includes the principles of heredity, laws of correlation and variation, in and in and cross breeding, parentage, form types, and pedigree. Attention is given to the subject of breeding for beef and for the dairy.

Required of Agricultural Sophomores, second term, 3 hours. Credit 36 hours.

5. *Stock Feeding.* The subject includes animal nutrition, chemistry of feeding stuffs, nutritive ratios, making rations, and a careful inquiry into the nutritive value of stock-feeds available on the ranches and markets of New Mexico.

Required of Agricultural Juniors, second term, 5 hours. Credit 60 hours.

6. *Dairying.* The course in dairying comprises a study of the properties of milk and methods of handling milk and its products in the private dairy and in the thoroughly equipped creamery. Receiving and weighing, testing, separating, ripening cream, churning, pasteurizing and marketing are subjects discussed in class room. Instruction is also given in the principles of the Cheddar system of making cheese.

Required of Agricultural Seniors, first term, 3 hours plus 4 hours practice. Credit 60 hours.

### Horticulture.

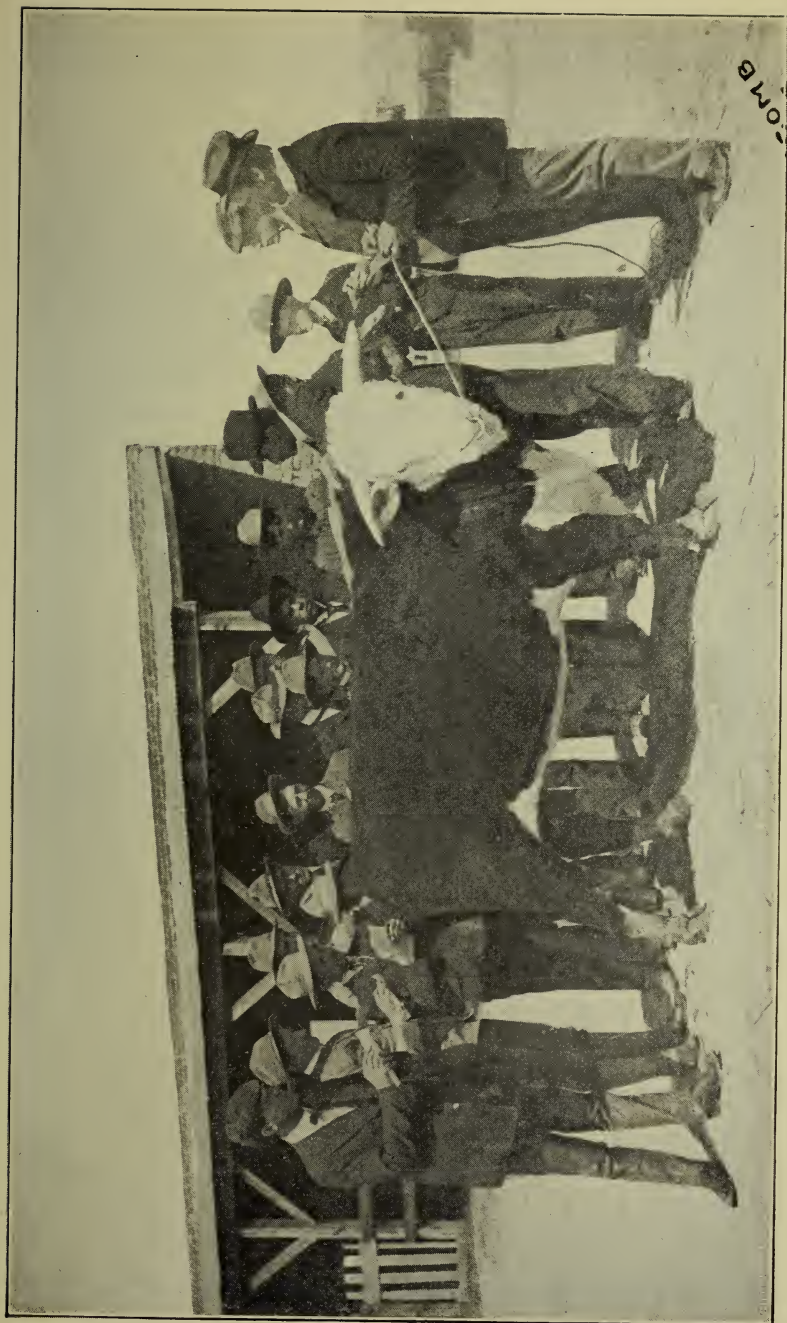
B. *Floriculture.* While the work in floriculture is designed to be of a popular and practical nature, yet a few of the more general principles upon which successful floriculture is based will be taught. The student is expected to become acquainted with common floricultural operations, such as making cuttings, mixing soils, potting, repotting, watering, germination of seed, arrangement of flowers in bouquets, etc.

Required of all Senior Preparatory women, first term, 2 hours in class room and 2 hours practice.

A. *Elementary Horticulture.* Introductory principles. The work will necessarily be elementary in nature yet sufficiently comprehensive to be of practical use, as well as to form a basis for advanced work for those who wish to pursue the subject further. The laboratory work is so arranged as to consist of operations most likely to be useful to the student after leaving college. The student will learn how to start new plants and ornamental shrubs, graft, bud, and top-work; plant, prune, irrigate, etc.

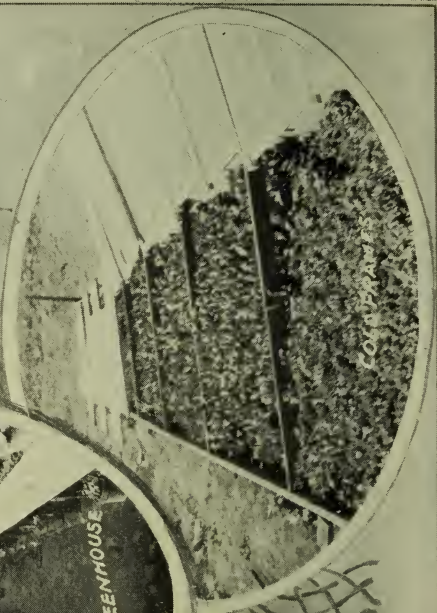
Required of all Senior Preparatory students, second term, 2 hours in class room and two hours practice.

1. *Greenhouse Management.* Work in the greenhouse, with hot-beds, and with cold frames occupies an important place among horticultural subjects. Winter grown flowers and vegetables are attracting more attention each year. Varieties of flowers and vegetables adapted to this line of work

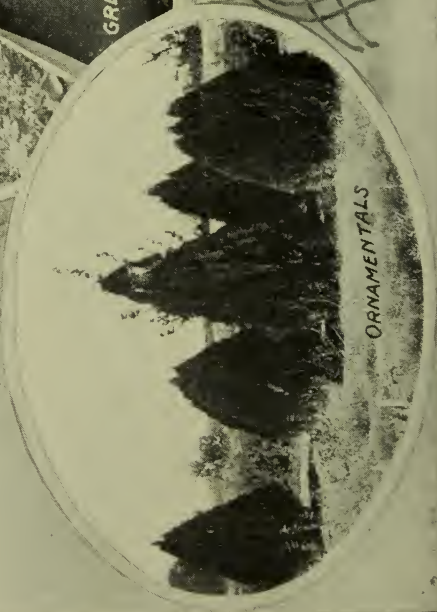


Judging Cattle.





GREENHOUSE



ORNAMENTALS



are studied, and due attention is given to methods of growing them for home supply and for market.

Required of Agricultural Freshmen, first term, 2 hours. Credit 24 hours.

2. *Greenhouse Construction.* The principles of greenhouse construction and their heating systems and other appurtenances; hot-beds and their uses; cold-frames, their limitations and adaptations in this region.

Required of Agricultural Freshmen, second term, 1 hour. Credit 12 hours.

3, 4. *Greenhouse Handicraft.* Application of the principles learned under 1 and 2. Practical work in arrangement and construction, inside and outside the greenhouse; transplanting from greenhouse to cold-frame and into bed and field; general greenhouse benchwork.

Required of Agricultural Freshmen, first and second terms, 2 hours practice. Credit 24 hours.

5. *Horticulture.* The whole field of propagation is covered under this heading, and includes propagation by seed, separation and division, layering, cuttings, budding, grafting, etc. General nursery management is made a strong feature of the work, and the student is familiarized with nursery-men's methods. The practice in this course affords students opportunity to propagate plants and trees by all the different methods studied in class. This course is an essential to all future horticultural work and forms the foundation for general fruit culture. The Nursery Book by Bailey is the text used.

Required of Agricultural Freshmen, third term, 2 hours and 2 hours practice. Credit 36 hours.

6. *Forestry.* The study of wind-breaks, home planting, utility of forest plantations, and the general influence of forests on the climate and water courses. The subjects of forest reserves and forest-tree planting will also receive careful attention.

Required of Agricultural Sophomores, third term, 2 hours. Credit 24 hours.

7. *Olericulture.* General principles underlying vegetable

culture; practical work in planning and laying out vegetable gardens; preparing seed beds, planting, transplanting, cultivation, irrigation and preparing vegetables for market. Bailey's *Principles of Vegetable Culture* is used as a text.

Required of Agricultural Sophomores and Domestic Science Juniors, third term, 2 hours and 2 hours practice. Credit 36 hours.

8. *Pomology*. The work in pomology includes all the subjects relating to fruit culture. Evolution, classification, location and climate, wind-breaks; tools and tillage, plans and planting, diseases and insects, thinning, pruning, spraying, irrigation, picking, packing, and marketing are among the subjects presented. The extensive orchards and vineyards on the college farm and several commercial orchards and vineyards in the vicinity afford unusual means of illustration, and students become acquainted with varieties which are adapted to this section. Bailey's *Principles of Fruit Growing* is the text-book.

Required of Agricultural Juniors, first term, 5 hours. Credit 60 hours.

9, 10. *Pomology*. Laboratory practice in planting, pruning, thinning, spraying, crossing, irrigating and note taking.

Required of Agricultural Juniors, second and third terms, 2 hours practice. Credit 24 hours.

11. *Economic Entomology*. This course is designed to give students a fair knowledge of the principal groups of insects of economic importance, especial attention being given to the study of injurious insects and the means of destroying them.

Required of Agricultural Juniors, first term 2 hours. Credit 24 hours.

12. *Landscape Gardening*. A study of systems of landscape gardening—comprising such subject matter as laying out and planting residence grounds, railroad, hotel, and public parks; location and setting of houses and other buildings; avenues, drives, walks; trees, shrubs, flowers, lawns; beds and borders; grouping, variation, and color effects; and the general principles involved in the arrangement and planting of home grounds and farm for beauty, comfort and utility.



Required of Agricultural Juniors, third term, 2 hours. Credit 24 hours.

13. *Plant Breeding.* The student having completed his biological studies is prepared for a discussion of plant breeding. Selection, crossing, variation, and the influence of environment, food, etc., are investigated.

Required of Agricultural Seniors, second term, 2 hours. Credit 24 hours.

14. *Floriculture.* Advanced work in the care of plants for the house and greenhouse; general designing of floral decorations, etc.

Required of Domestic Science Juniors, first term, 2 hours and 2 hours practice. Credit 36 hours.

### Equipment.

The farm connected with the College contains about seventy acres of land under irrigation, which is divided into fields and plots for use in demonstrating the class-room work. Grasses, cereals, roots, forage and other farm crops are grown for demonstration and study. The feeds raised on the farm are utilized in feeding experiments and for maintaining stock used in illustration of the principles taught. The Hereford, Short-horn, Jersey and Guernsey breeds of cattle are represented in the college herd, affording opportunity for the student to become familiar with thoroughbred and grade stock. A large corral has been completed, which furnishes commodious quarters for the stock and for the storage of feeds and machinery.

The department is well equipped with the latest improved machinery. A gasoline engine, feed-grinder, fodder-shredder and cutter, mowers, harvesting machinery, thresher, bailer, plows, discs, cultivators, drills, seeders, corn planter, bordering machine, weeders, scrapers for leveling, and other modern machinery compose the equipment in this line. Special effort is made to maintain this feature of the equipment at its best in order to furnish facility for studying machinery used in this as well as other sections of the country, thus broadening the students range of observation and thought.

A pumping irrigation plant has been installed which will give opportunity for studying the possibilities in that line.

The orchards and grounds contain many varieties of apples, pears, peaches, plums, etc., and over sixty varieties of grapes in addition to other small fruits.

The vegetable gardens, flower gardens, greenhouse, and cold-frames, afford excellent opportunity for study and experiment. The arboretum, forestry plantations, and lawns give enlarged facilities for observation and study.

Constant additions are being made to the equipment in all the lines of work. The experimental work of the Experiment Station, carried on by this department may be made an excellent adjunct to the instruction given in class, affording as it does opportunity for the student to follow his particular bent, whether he be interested in dairying, feeding steers or sheep for market, studies in field crops or grasses, work in the orchards, vineyard, vegetable gardens, etc., or any or all of these lines in general, in order to give breadth and depth to his powers in thinking out practical problems in agriculture and horticulture.

*Student Labor.*—In connection with the investigations of the Department there are many opportunities which will enable industrious students to use a certain amount of their time in practical work. This labor is paid for at the rate of from  $7\frac{1}{2}$  cents to 20 cents per hour. It may be added, for those who are interested, that a large amount of work of this nature could have been furnished to students the past year had their desires been made known to the Professor in charge. Naturally work of this nature can be made an important aid to those who desire to pay part of their expenses while in College.

### SHORT COURSES IN AGRICULTURE AND HORTICULTURE

While we advise those who expect to become professors or instructors in agricultural schools and colleges to take the four years' course in agriculture outlined above, yet we real-

ize that there are many who for various reasons are unable to do this.

Owing to the demand for trained men to fill positions as superintendents of ranches and dairies, and believing that a territorial institution should offer every possible encouragement to those who desire to fit themselves for their chosen lines of work, a two years' course and a twelve weeks' course in agriculture and horticulture have been arranged.

## TWO YEARS' COURSE IN AGRICULTURE

In order to be admitted to this course students must be at least sixteen years old and possess a good knowledge of Arithmetic, Reading, Spelling, United States History, Grammar and composition.

### Two Years' Course in Agriculture.

#### FIRST YEAR

FIRST TERM	SECOND TERM	THIRD TERM
English, 4 Mathematics, 5 Live Stock, 2 Greenhouse Management, 2 Greenhouse Handicraft, 2 P Economic Ent., 2 Carpentry, 6 P, or Elective, 3	English, 4 Mathematics, 5 Live Stock, 2+2 P Princ. of Breeding, 3 Horticulture, 1+2 P Carpentry, 6 P, or Elective, 3	English, 4 Elementary Chemistry, 4 Live Stock, 2 Horticulture, 2+2 P Botany, 4

#### SECOND YEAR

English, 5 Commercial Arithmetic, 5 Pomology, 5 Agr'l. Chemistry, 3+6 P	English, 5 Bookkeeping, 5 Soils and Crops, 2 Stock Feeding, 5 Pomology, 2 P	English, 5 Soils and Crops, 4 Olericulture or Vegetable Growing, 2+2 P Soil Physics, 8 P Bookkeeping, 5
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This course is designed to prepare young men to become practical farmers and ranchmen, and to be able to fill positions as superintendents of ranches and large estates. The course includes much of the work of the regular four years' course in agriculture, besides requiring a number of other studies which have been selected as specially valuable for the student. For information as to the character of the work in each study see discussion under the four years' course in agriculture.

## TWELVE WEEKS' COURSE IN AGRICULTURE AND HORTICULTURE

There are many young men who for various reasons are unable to spend two or more years at college. In order to meet the needs of this class of students a special course of twelve weeks has been opened for young men who desire to take advantage of the opportunity for a short period of training. The work of the course is practical throughout. Only those lines of work have been selected that are of the most value to the student. The work consists almost wholly of lectures and practice. The lectures consist of a discussion of the theory of the subject, while application of the theory will be made during the practice hours. For this purpose much time will be spent by the student in the orchard, garden and field, in the greenhouse, and in the management of the hot-beds and cold-frames.

This course will be given each term of the college year with only sufficient variation in the subject matter taught to suit the seasons of the year.

The course in each term will continue twelve weeks. The first term's course will begin September 9, 1903. The second term's course will begin November 30, 1903. The third term's course will begin March 8, 1904.

*Requirements for Admission.*—Students entering this course must be at least sixteen years of age. There are no entrance examinations required.

### Twelve Weeks' Courses.

FIRST TERM	SECOND TERM	THIRD TERM
Orchard and Flower Garden, 15P.....	Greenhouse, Hot-Beds, and Cold-Frames, 15P.....	Garden and Field, 15P....
Lecture in Pomology, 4....	Lecture in Pomology, 4....	Lecture in Vegetable Growing, 4.....
Lecture in Live Stock, 2...	Lecture in Economic Entomology, 2.....	Lecture in Soils and Crops, 2.....
English, Arithmetic or other studies, 10.....	English, Arithmetic or other studies, 10.....	English, Arithmetic or other studies, 10.....

## BIOLOGY AND GEOLOGY

PROFESSOR WOOTON

### Biology.

The regular required course in biology is only elementary and general in character, and is designed to present the general principles of the subject to the student and at the same time introduce him to a limited number of types of the various larger classes of animals and plants. For this work the lecture and laboratory method is used.

*A. Botany.* A general treatment of the flowering plants, their structure, functions of parts, simpler classification, distribution and economic uses.

Required of all Senior Preparatory students, third term, 4 hours.

1. *Zoology.* Fundamental principles of life; elementary study of the cell, its parts and functions; introductory treatment of the effects of variation, heredity, environment and use; types studied are invertebrate animals, most of the time being devoted to the gross anatomy and comparative morphology. Laboratory manual, Pratt's Invertebrate Zoology.

Required of all regular Freshmen (except Mechanical Engineers), first term, 2 hours and 6 hours practice. Credit 60 hours.

2. *Zoology.* Continuation of the study of animal life. Types examined are the higher Invertebrates and Vertebrates. Various laboratory manuals are used in the laboratory work, while Parker and Haswell's Text Book is the most important reference book.

Requirements and credit same as in Biology 1, second term.

3. *Botany.* The comparative morphology of plants; studied by means of representative types of the larger classes. The phylogenetic development of the plant kingdom is set forth as clearly as the time will allow. Text book, Campbell's Evolution of Plants.

Requirements and credit same as in Biology 1, third term.

4. *Bacteriology.* Lectures and demonstration work on bacteria of water, air, soil and foods and those causing fermentation and disease; preparation of culture media and cultures;



staining and determining species. DeBarry, Sternberg and Newman's books are used for reference.

Required of Agricultural and Domestic Science Sophomores, third term, 2 hours. Credit 24 hours.

5. *Plant Physiology*. Lectures and laboratory practice on relations of plants to their environmental stimuli; composition of the plant body, its changes, constructive and destructive. Sachs, Detmer, MacDougal, and Ganong used as reference books.

Required of Agricultural Juniors, third term, 4 hours, or equivalent in practice. Credit 48 hours.

6. *Human Physiology*. Lectures, demonstrations and recitations on the anatomy, histology and physiology of the human body. Text book, Martin's Human Body, Advanced Course.

Required of Juniors of the General and Domestic Science Courses, third term, 5 hours. Credit 60 hours.

*Elective Courses* are offered by this department in either zoology or botany, the particular branch of either subject being largely at the option of the student. Special facilities for the study of the flowering plants of New Mexico are to be obtained at this institution. All students electing work in this department must have completed Biology 1, 2, and 3. Minimum, 6 hours of practice; credit 36 hours; more time in proportion. All such electives will be accepted as minors for graduate work. Students doing major graduate work in this department must have done one year of elective work in some biological subject beside Biology 1, 2 and 3, and for that major must do not less than 10 hours per week for one year. Arrangements for all elective and graduate work must be made with the head of the department.

#### Equipment.

This department occupies three rooms on the upper floor of the Science Hall. One room is used solely as a laboratory for biology and physiology. It is equipped with gas, water, tables, cases, dissecting and compound microscopes, microtomes, necessary instruments and materials, charts, casts,



bacteriological incubators, ovens and a general assortment of apparatus, glassware and reagents for all kinds of biological work. The second room is used as the herbarium. In it are the college herbarium of about 10,000 sheets and the private herbarium of the head of the department, about 3,000 sheets. These two herbaria contain representatives of perhaps 85 per cent. of the species of flowering plants and ferns of the Territory of New Mexico. There are also about 1,000 specimens of fungi and algae represented, the greater portion of these being named fungi of economic importance. The herbarium has abundant case and table room. The third room is used as an office for the department, and contains the departmental library of about 400 volumes, besides numerous pamphlets. Several of the more important botanical periodicals are to be found here.

### Geology.

The work in this subject is taught by lectures and recitations with prescribed text-book reading. Occasional field work is arranged for as often as facilities will permit.

1. *Dynamical Geology*. Includes dynamical, structural and physiographic geology, some considerable stress being laid upon rocks, rock-making minerals and their derivative soils. Scott's Introduction to Geology and Le Conte's Elements of Geology are used as texts.

Required of all Seniors, second term, 5 hours. Credit 60 hours.

2. *Historical Geology*. A detailed treatment of the geological history of the earth together with some elementary work in paleontology.

Required of General Course Seniors, third term, 5 hours. Elective to students who have taken Biology 1, 2 and 3 and Geology 1. Credit 60 hours.

### Equipment.

The department of geology occupies one room on the second floor of the Science Hall, and has at its disposal a collection of the common minerals, the U. S. Geological Survey collection of rocks, a Bausch and Lomb petrographic microscope, a number of fossils and a departmental library includ-

ing most of the publications of the U. S. Geol. Survey besides the best modern texts and references on the subject.

## PHYSICS

PROFESSOR TINSLEY

### Physics.

This course in General Physics is designed to present a survey of the subject and acquaint the students with the fundamental conceptions of matter and energy, their laws and the practical application of these to the problems of engineering, agriculture, etc. The method of instruction is by recitations, lectures, demonstrations and laboratory practice.

A. Introductory principles of the subject.

Required of all Junior Preparatory students, first half year, 5 hours.  
Professor Richards.

1. The properties of matter, mechanics of solids and liquids, sound.

Required of all regular Sophomores, first term, 4 hours and 2 hours practice. Credit 60 hours.

2. Study of heat and light.

Requirements and credit as in Physics 1, second term.

3. Study of light, electricity and magnetism.

Required of all Sophomores (except Agricultural students), 4 hours and 2 hours practice. Credit 60 hours.

4, 5, 6. Advanced work, principally experimental, adapted to the needs of the student. Elective for students who have completed 1-3, and a minor for graduate students.

3 hours recitation or 6 hours practice required as a minimum. Credit for three hours is 36 hours, additional time in proportion.

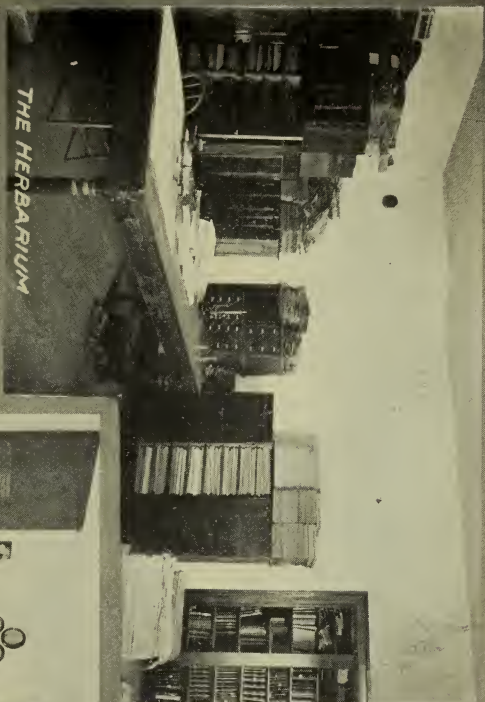
7, 8, 9. Continuation of 4, 5, 6. Elective for those who have completed 1-6 and a major for graduates.

Time requirements and credit as in 4-6.

### Soil Physics.

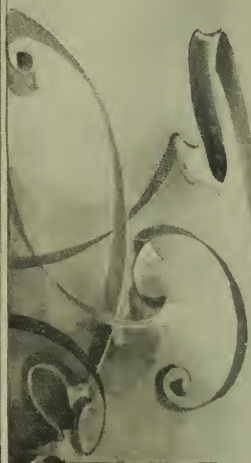
This course is designed to meet the increasing demand among agriculturists for a more intimate and extensive acquaintance with the soil. It also fits students to become specialists in soil work. In this line the demand for trained men now exceeds the supply for the various soil surveys

THE HERBARIUM



BIOLOGICAL  
LABORATORY.

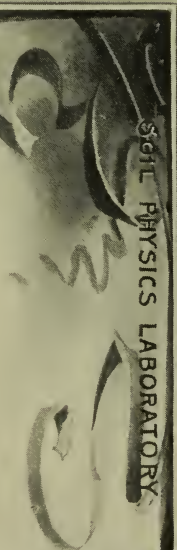




PHYSICAL LABORATORY



SOIL PHYSICS LABORATORY





which are being undertaken by the state and national governments.

1. A brief survey of the origin and physical characters of soils by lectures and recitations; with laboratory and field practice in soil sampling, determinations of moisture, salt content, water holding power, mechanical analyses, classification and mapping.

Required of Agricultural Sophomores, and elective for other students, third term, 8 hours practice. Credit 48 hours.

2, 3, 4. Advanced work on soils. Elective for those who have completed soil physics 1, and as a minor for graduate students.

Minimum 6 hours practice. Credit for minimum 36 hours.

5, 6, 7. Advanced work on soils. Elective for those who, wishing to specialize in this line, have completed 1-4, and as a major for graduate students.

Time requirements and credit as in 2-4.

### **Meteorology.**

1. Lectures and recitations with accompanying laboratory practice. A study of the common meteorological instruments, their construction and uses, and those meteorological phenomena having most direct bearing on the agriculture of New Mexico.

Required of Agricultural Juniors and elective for other students, first term, 2 hours. Credit 24 hours.

### **Equipment.**

This department occupies three rooms on the second floor of the Science Hall.

The physical laboratory is a large room (50x20 ft.) on the south side of the building, well adapted to physics work. It has in it a dark room, supplied with gas and water, for photometric and photographic work, wall cases for the storage of apparatus, lecture table and wall desks for student work.

The room devoted to soil work is well fitted with work desks, tables and shelving and is supplied with gas and water.

Between the other two is a small room used for some of the meteorological apparatus and for storage.

The physical laboratory is quite well supplied with apparatus for the usual class demonstrations and practice. In addition there are a number of pieces of finer apparatus for advanced work; e. g. Atwood's machine, balances, barometer, thermometers, including one of Greene's standards, spectrometer, polariscope, stereopticon, photographic outfit, Rowland D'Arsonval and tangent galvanometers, resistance box, standard cell and Wheatstone bridge.

The soil physics laboratory is especially well equipped, this being one of the prominent lines of investigation of the Agricultural Experiment Station. The equipment includes electrical apparatus for the determination of "alkali" in soils and waters, electrical soil hygrometers and accessories, soil samplers, drying ovens, balances and weights; shaker, water motor, and centrifuge for mechanical analyses of soils, and the necessary glass and platinum ware and reagents for carrying on investigations of the physical properties of soils and their salt content.

There is also a current meter and register for use in water measurements.

For the work in meteorology, in addition to an evaporation tank and anemometer, there are the usual instruments furnished by the U. S. Weather Bureau to voluntary observers.

#### **CHEMISTRY, MINERALOGY, METALLURGY AND ASSAYING.**

PROFESSOR HARE

MR. POST

This department offers exceptional facilities for work in these lines. The work required of all students is a general course in the fundamental principles of the subject of inorganic chemistry, the subject being presented by lectures and recitations with demonstrations in the class-room and application of the principles by each student in the laboratory. This course concerns itself only with the laws of inorganic chemistry and qualitative analysis, but opportunity for work in quantitative analysis or any other branch of the subject of chemistry is offered in a second year, which is elec-



tive. Students in the Agricultural Course are required to do an extra year of work in the chemistry of agricultural products, soils, waters, etc.

In Assaying, a year's course is offered to those who wish to become practical assayers, instruction being given in both wet and dry methods in common use.

The instruction in Mineralogy is by the laboratory method with collateral reading; while in Metallurgy, lectures and recitations with occasional visits to smelters in El Paso and vicinity, is the plan followed.

In so far as is at all practicable, all the work is taught by the laboratory method, which this department is especially well fitted to furnish.

*A. Elementary Chemistry.* The study of the subject as outlined in an elementary text book, supplemented by frequent experiments performed before the class. The chemistry of this term is intended as a preparation for the different branches of science taught later.

Required of all Senior Preparatory students, third term, 4 hours.

1. *General Chemistry.* A study of the principles of general inorganic chemistry as outlined in Storer and Lindsay's Manual of Chemistry. The text book work is supplemented by frequent exercises in the laboratory.

Required of all Juniors and Assaying Students, first term, 5 hours. Credit 60 hours.

2. *General Chemistry.* Continuation of the previous term's work and the subject of qualitative analysis begun. The work is principally in the laboratory.

Required of all Juniors and Assaying Students, second term, 10 hours practice. Credit 60 hours.

3. *Qualitative Analysis.* The work this term is entirely in the laboratory, being a continuation of the subject of qualitative analysis commenced the previous term. Upon the completion of this term's work students are expected to be able to analyze ordinary compounds.

Required of all Juniors and Assaying Students, third term, 8 hours practice. Credit 48 hours.

4. *Agricultural Chemistry.* The work consists of a text book study of such subjects as animal nutrition, plant food and fertilizers, as presented in Warington's *Chemistry of the Farm*.

Required of Agricultural Seniors, first term, 3 hours. Credit 36 hours.

5, 6. *Agricultural Chemistry.* Laboratory work in the analysis of agricultural products, waters, soils, etc.

Required of Agricultural Seniors, second and third terms, 6 hours practice. Credit 36 hours.

7. *Quantitative Analysis.* Laboratory practice in general quantitative analysis. During this term, students receive instruction in the use of the balance and in general quantitative manipulation. Each student is required to make some of the fundamental quantitative determinations, thus becoming familiar with quantitative processes by actual practice.

Elective for all students who have completed Chemistry 1—3, first term, 6 hours practice. Credit 36 hours.

8. *Advanced Chemistry.* The nature of the work done during this term is left largely to the choice of the student; but, in general, usually consists of laboratory work along some line of original investigation. The work, especially during the latter half of the term, should be along the line leading up to the thesis work to be taken up the next term.

Elective for all students who have completed Chemistry 7, second term, minimum time 6 hours practice. Credit 36 hours for minimum time; more in proportion.

9. *Thesis.* Students, who elect chemistry for their thesis work, are required to take up some line of original investigation and prepare a paper on the same. The work is principally in the laboratory, supplemented by a course of outside reading. While but one term is required for thesis work it is much better to select the subject in the second term and devote a considerable portion of that term to the work.

Required of all Seniors who choose a chemical thesis, third term, 10 hours practice as a minimum.

10, 11, 12. *Graduate Work.* Advanced work in chemistry, leading to the degree of M. S., is offered to graduate stu-

dents. The character of the work selected is left largely to the choice of the student, subject to the approval of the head of the department. The work taken up, however, must consist largely of original research along some line of chemical investigation. It practically amounts to a continuation of work of the same character as the thesis work of the Senior year, although the subject may be different.

The minimum time requirement for this work as a major is 10 hours practice per week throughout one year.

1. *Mineralogy.* A laboratory study of the more important minerals, special attention being given to the ores and other minerals of commercial value. The more important rock-making minerals are studied as completely as the time devoted to the subject will permit. Dana's System of Mineralogy and other standard works are used as reference books.

Required of all (except Agricultural) Seniors and Assaying Students, first term, 10 hours practice. Credit 60 hours.

1. *Metallurgy.* The work is presented in the form of lectures and recitations, using Hiorn's Text-book of Elementary Metallurgy, with a course of supplementary required reading.

Required of all Senior Mechanical Engineers and Assaying Students, second term, 4 hours. Credit 48 hours.

1. *Assaying, Dry Methods.* For the accommodation of those of our students who desire to elect the subject of assaying, instruction is given in the fire assay of gold, silver, and lead ores. Each student is assigned furnaces, and is supplied with the necessary crucibles, scorifiers, material for making fluxes, etc. Besides other necessary apparatus, he also has the use of balances for weighing out charges, mixing fluxes, and weighing gold and silver beads.

Required of all Assaying Students, and elective for others who have completed Chemistry 1-3, first term, minimum time 6 hours. Credit 72 hours.

2. *Assaying, Wet Methods.* The study of the quantitative determination of copper, iron, lime, silica, etc., by the best volumetric and gravimetric methods.

Required of all Assaying Students, and elective for others who have completed Chemistry 15, second term, minimum time 6 hours. Credit 72 hours.

5. *Assaying, Research Work.* The work relates chiefly to the composition and metallurgy of ores. Students are encouraged to make original studies of methods for the extraction of metals from their ores, in order to determine which are most applicable and economical in particular cases.

Required of all Assaying Students, and elective for others who have completed Chemistry 16, third term, minimum time 6 hours. Credit 72 hours.

The work in assaying is principally in the laboratory, but is supplemented by a course of reading in standard books on assaying, analytical chemistry, etc.

The time required during the year, of students taking assaying, is six hours or equivalent practice per week. It will usually be possible, however, to arrange for extra work; and students are strongly urged to do so when possible, as the amount of knowledge gained in this subject depends almost entirely upon the time devoted to it in the laboratory.

Students taking assaying are also required to take the regular work in chemistry, geology, mineralogy and metallurgy.

Students will not be admitted to the course in assaying, who have not had sufficient preliminary training to enable them to carry the work.

### Equipment

The chemical department occupies all of the lower floor of the Science Hall, with the exception of one room. The college work and station work have separate quarters. Five good sized rooms, and a smaller store room, are used in the instruction of students, and three rooms and a store room, for the station work. A small brick building, located at a safe distance from the main building, is also used by the department as a store house for gasoline and other combustible and explosive substances.

The rooms set apart for use in the instruction of students are as follows:

1. A large qualitative laboratory for students beginning the study of chemistry. This laboratory is fitted with work desks which are supplied with gas, water, and drain, and have drawers and lockers with combination locks. The qualitative laboratory also contains, among other things, a sink, and a fume closet for work in which noxious gases are present.

2 A quantitative laboratory for the use of advanced students. This laboratory is supplied with two thoroughly equipped work desks, fitted with gas and water pipes, a drain trough through the center, a bottle rack on the top, and drawers and lockers with combination locks. This laboratory also contains a first class fume closet and a sink.

3. A fire-proof assay laboratory, which contains six gasoline crucible furnaces and two muffle furnaces. This laboratory is also supplied with a Bosworth ore crusher, a sampling plate, a complete set of sieves, crucibles, tongs, cupel moulds and other accessories necessary in a well equipped laboratory of this character.

4. A weighing room, opening into the quantitative and assay laboratories. This room is fitted with a substantial balance table mounted on brick piers in contact with the ground, thus insuring freedom from floor vibration. This room is supplied with a high grade assay balance, two chemical balances, and a heavier balance for rough weighing. This room is also provided with a large table on which to mix assay charges, etc., and with a case for sample bottles.

5. A lecture room, supplied with a lecture desk, a sink, water, gas, and other accessories.

6. A conveniently located store room for chemicals and general laboratory supplies for students.

The laboratories used for the chemical work have brick walls, and wooden ceilings, fourteen feet high. Each laboratory is supplied with one or more ventilating flues which aid in the removal of fumes and in the ventilation of the rooms. The general equipment of the laboratories has been very



materially increased, and is modern and first-class in every particular.

The laboratories fitted up for the accommodation of the Experiment Station work contain, among other things, three work desks supplied with gas, water and air exhaust pipes for rapid filtration, a commodious hood to carry off noxious gases, apparatus for the determination of nitrogen by the Kjeldahl method, a titration shelf and system of burettes, and a large still for the preparation of distilled water. The Station equipment also includes a balance table mounted on brick piers in contact with the ground, a Herzberg and Kulhmann short beam automatic analytical balance, an Ainsworth No. 1 assay balance, a Springer torsion balance, a Scheibler's polariscope, an imported mill for grinding samples, and several hundred dollars worth of platinum ware.

While the Station laboratory is not designed for the use of students, the work carried on there serves to illustrate actual practical analytical work.

The chemical department also has a good collection of mineral specimens for class use, and quite a large department library of reference books and periodicals.

The gas supply for the department is furnished by a 200 light, Matthews gasoline gas machine, which is provided with an automatic mixer whereby the gas is kept uniform in quality.

The water supply for the department is furnished by a deep well on the college grounds, the water of which is of much better quality than most of the well waters of the valley.

*Fees.* For information concerning fees and deposits, required by this department, see the general article on "Fees and Deposits."

### DOMESTIC SCIENCE.

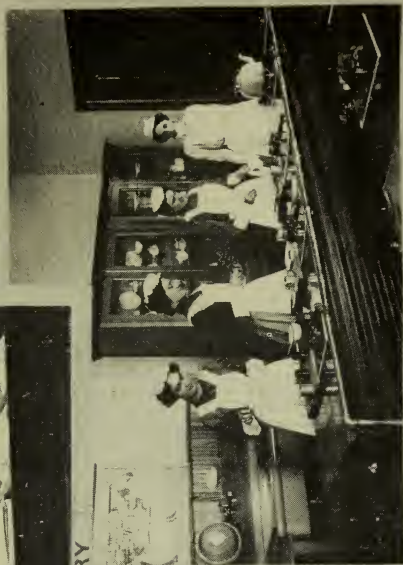
PROFESSOR HORNING

MISS FOSTER

This course is especially designed to meet the needs of the young women students by giving them both practical and



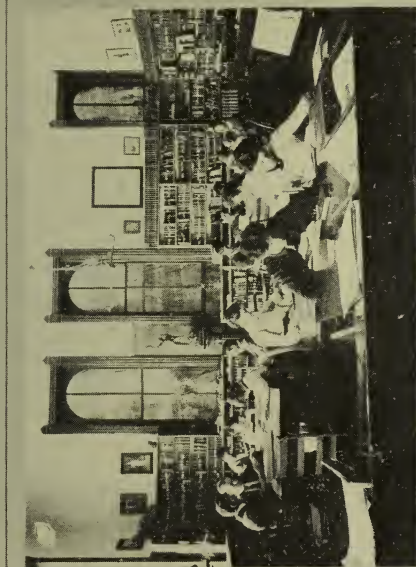
DOMESTIC SCIENCE

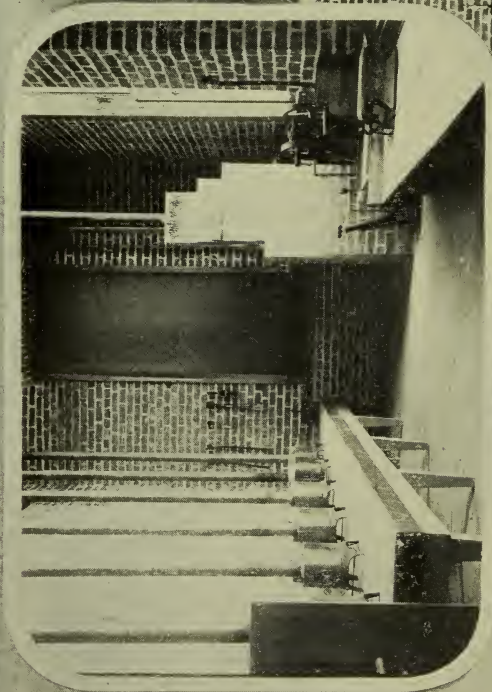


HISTORY

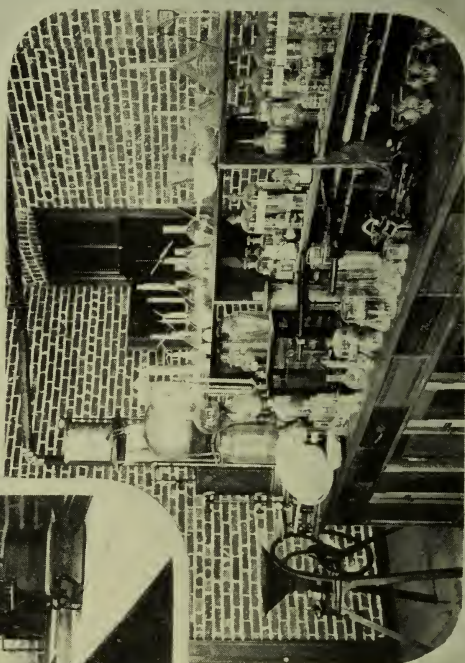


LIBRARY

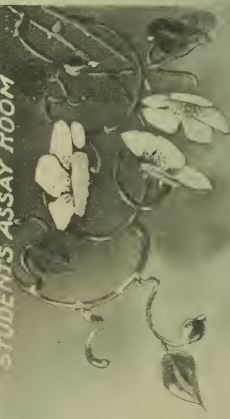




STUDENTS' ASSAY ROOM



STATION CHEMICAL LABORATORY.



scientific instruction in things pertaining to the home. The endeavor is so to combine theory and practice that graduates of the department may be materially aided in the administration of the household.

G. E. *Plain Cooking.* Practical instruction in simple cookery.

Required of all Senior Preparatory women, first and second terms, 4 hours practice.

F, D. *Sewing.* Instruction in plain sewing, mending, darning, and the making of plain garments.

Required of all Senior Preparatory women, first and second terms, 4 hours practice.

C. *Cooking.* Lessons in cooking continued.

Required of all Senior Preparatory women, third term, 2 hours practice.

B. *Sewing.* Practice in plain sewing.

Required of all Senior Preparatory women, third term, 2 hours practice.

A. *Hygiene.* Lectures and recitations in physiology and hygiene.

Required of all Senior Preparatory women, third term, 1 hour.

1, 3. *Cooking.* The study of food principles and the composition of foods is given in conjunction with cooking.

Required of Domestic Science Sophomores, second term, 6 hours practice; third term, 2 hours practice. Credit 48 hours.

2, 4. *Sewing.* Plain sewing continued; the making of undergarments and shirt waists.

Required of Domestic Science Sophomores, second and third terms, 4 hours practice. Credit 48 hours.

5. *Canning and Preserving.* Preserving and canning fruit, jelly making, and pickling.

Required of Domestic Science Juniors, first term, 6 hours practice. Credit 36 hours.

6. *Advanced Cookery.* Advanced work consisting of more complicated cooking.

Required of Domestic Science Juniors, second term, 8 hours practice. Credit 48 hours.

7. *Invalid Cookery and Serving.* Cooking for the sick with particular application to special diseases. A brief waitress



course including lectures and practice in the proper serving of food.

Required of Domestic Science Juniors, third term, 6 hours practice. Credit 36 hours.

8. *Dietetics*. Arrangement of daily dietary and study of food combinations with special application to disease.

Required of Domestic Science Seniors, first term, 2 hours. Credit 24 hours.

9. *Dressmaking*. Adapting and using of patterns, fitting and making of dresses.

Required of Domestic Science Seniors, first term, 2 hours practice. Credit 12 hours.

10. *Home Sanitation*. Lectures on heating, lighting, and ventilation. Reference book, Ellen H. Richards' *Home Sanitation* and Waring's *How to Drain a House*.

Required of Domestic Science Seniors, second term, 2 hours. Credit 24 hours.

11. *Dressmaking*. Cutting, fitting, and finishing.

Required of Domestic Science Seniors, second term, 2 hours practice. Credit 12 hours.

12. *Chemistry of Foods*. Chemistry of some of the commoner foods. Lectures and recitations.

Required of Domestic Science Seniors, third term, 3 hours. Credit 36 hours.

13. *Chafing-dish Cookery*. Instruction with practice in the use of the chafing-dish.

Required of Domestic Science Seniors, third term, 2 hours practice. Credit 12 hours.

14. *Dressmaking*. Practice in dressmaking.

Required of Domestic Science Seniors, third term, 2 hours practice. Credit 12 hours.

*Equipment*. The kitchen laboratory is provided with individual gas stoves on desks fitted with small closed cupboards containing those cooking utensils, of which the students are in constant need, a convenient sink, a refrigerator, cupboards filled with dishes for serving, and all the utensils and conveniences found in the best equipped kitchens. There is also a large range, food charts, and charts illustrating the cuts of meat. The library contains many books of reference on all phases of the household.

The sewing room is equally well equipped with all the conveniences necessary to the department; three machines, cutting tables, lap boards, and sewing chairs. A fitting room is separated from the main sewing room by portieres, and furnished with mirror, washstand, couch, and other necessities.

## ENGLISH.

PROFESSOR DAVIS

The instruction in English aims to develop in the student the ability to speak and write good English. As a medium of securing this the course is divided into two parts; namely, Rhetoric and Literature. These two subjects are correlated as much as possible throughout the course.

With our splendidly equipped Library, the highest grade of work can be done in this department. The general library contains about 3,500 volumes, about fifty per cent of which is valuable to the English student for reference work. Besides the general library, a special library equipped with reference to the work planned, is set apart for this department.

The student is required throughout the course to do considerable research work; to hand in at the close of each term, a theme (the subject may be chosen by the student) which must be accompanied by an outline and a list of the works consulted.

The candidate for admission into this department must have a practical knowledge of spelling, capitalization punctuation, grammatical construction, structure of sentences, and paragraphing.

C, B, A. *American Literature*. This course includes the historical development of American Literature, and a critical study of its masterpieces. Weekly compositions, based upon the reading done in the class, are required.

The work of the first term is devoted to the study of Franklin, Irving, Cooper, Bryant, Halleck, and Drake; the second—to Emerson, Hawthorne, Longfellow, and Whittier; the third—to Poe, Holmes, Thoreau, Lowell, and Parkman.

Required of all Senior Preparatory Students, throughout the year 4 hours.

1, 2, 3. *Composition and Rhetoric.* After completing this course, the student should have a thorough and practical knowledge of Composition and of the elementary principles of Rhetoric. In this work special stress is laid upon the form, style, and thought of the written work. Text book.—Lockwood & Emerson's *Composition and Rhetoric*.

Required of all Freshmen, throughout the year, 5 hours. Credit 180 hours. Professor Hadley.

4, 5, 6. *English Literature.* This work includes the historical development of English Literature, and a critical study of its masterpieces. Special work is given in the study of Chaucer, Spencer, and Shakespeare.

The work of the first term includes the historical development from Beowulf to Francis Bacon; the second, from Bacon to Edmund Burke; special work is given in the study of Bacon, Milton, Pope, Addison, and Burke. The third term is devoted to the study of the Romantic, the Modern, and Victorian Ages, and to the development of the English novel.

Required of all Sophomores, first term, and all those except in the Agricultural course, second and third terms. Credit 60 hours to Agricultural men, 180 hours to others.

7, 8, 9. *English Literature.* Later 19th century writers in American Literature, and bibliographical methods.

In this work, the first term is devoted to a selected list of poets; the second to essayists; and the third to novelists and historians. Each student is required to make a bibliography of the several authors as they are studied. Particular attention is given to the use of indexes, current magazines, and reference books. A few sets of cataloguing cards are written to teach the use of the card catalogue.

Required of all Juniors, throughout the year, 1 hour. Credit 36 hours. Miss Baker.

10, 11, 12. *Advanced Composition.* This work includes a thorough study of the principles of invention. Special attention is given to narration, description, exposition, and



argumentation. A large portion of the written work is based upon the reading done in the literature classes.

Required of all Seniors, throughout the year, 2 hours. Credit 72 hours.

### **The Seminary.**

The Seminary is a literary society composed of all the students in the English department. It affords excellent opportunities for training in orations, debates, essays, and declamations. The society meets once a month. Each member must take part once during the term, and must perform the part assigned him to the best of his ability. It is directly under the supervision of the head of the department and each participant receives individual instruction both in delivery and composition.

## **HISTORY AND PHILOPSOPHY**

PROFESSOR HADLEY

### **History.**

The ends aimed at in teaching this subject are: (1) to acquaint the student with the most important facts of Ancient Mediæval, and Modern History; (2) to aid him in interpreting these facts into the prevailing thought of the people at the time of the events; (3) to direct the student's attention to such literature as will assist him in getting a vivid idea of the life of the times of which the history treats.

B. *General History.* Most important points in the history of oriental peoples, and of Greece; the reading of, at least, one prescribed volume relating to said history, and the writing of an acceptable paper on said volume. Leading text-book, Wolfson's Essentials in Ancient History.

Required of all Senior Preparatory students, first term, 4 hours.

A. *General History.* History of Rome in outline, and the reading and abstracting of, at least, one prescribed book.

Required of all Senior Preparatory students, second term, 4 hours.

1. *General History.* History of The Middle Ages, and the reading and abstracting of one prescribed volume. Leading text-book, Munro's History of the Middle Ages.

Required only of students in the General Course, third term, Sophomore year, 5 hours. Credit 60 hours.

2. *History of Civilization*. Introduction to the more important elements that have influenced existing civilizations, and explanation of their fusion. A careful study of European Civilization, as outlined by Guizot and supplemented by frequent lectures.

Required of Domestic Science and General Seniors, second term, 5 hours. Credit 60 hours.

3, 4. *English History*. A study of the history of the English people, with special reference to dominant factors of Anglo-Saxon civilization.

Elective to all students who have completed history B and A or their equivalent first and second terms, 5 hours. Credit 60 hours per term. Students who elect one term will be expected to take both.

5. *American History*. Special period of American history. Elective; third term, 5 hours. Credit 60 hours.

#### Philosophy.

1. *Elementary Psychology*, embracing topics equivalent to those found in Halleck's Psychology and Psychic Culture; taught by recitations supplemented by lectures.

Required of Domestic Science and General Seniors, first term, 5 hours. Credit 60 hours.

2. *Applied Psychology*. In the study and mastery of some branch or branches, of common school education, the principles of elementary psychology will be constantly applied. This course will be of special benefit to those intending to teach.

Elective to students who have taken Philosophy 1, second term, 5 hours. Credit 60 hours.

3. *Theory and Practice of Teaching*, embracing the organization and administration of a school:—the rights and duties of boards, teachers, pupils, parents, etc.

Elective to students who have completed philosophy, 1 and 2, third term, 5 hours. Credit 60 hours.

#### Equipment.

The department of history is reasonably well equipped. It possesses MacCoun's Ancient and Classical Charts, MacCoun's Mediæval and Modern Charts, Johnston's Imperial

Chart of the World, Johnston's Imperial Map of Europe, Appleton's Universal Cyclopedia and Atlas, (12 volumes), Larned's History for Ready Reference, (5 volumes), Ridpath's History of the World, (4 volumes), and other works.

Those who pursue the courses in philosophy will have the opportunity of observing the methods practiced in the preparatory school.

The department offers rather extended courses in history, theoretical and applied psychology to those students of the General and Domestic Science courses who may choose to elect its work. To prospective teachers the work in psychology is of particular importance.

## MATHEMATICS AND ASTRONOMY

PROFESSOR HAGERTY.

### Mathematics.

C, B, A. *Algebra*. General review from the beginning of algebra to evolution; theory of exponents, radicals, quadratic equations, ratio, proportion, variation, progressions, imaginary quantities, inequalities, variables and limits, the binomial theorem (positive integral exponents), and logarithms. Text-book Milne's Academic Algebra.

Required of all Senior Preparatory students, throughout the year, 5 hours.

1, 2. *Plane Geometry*. Nearly one-third of the time is given to original exercises. Text-book Wentworth's -Plane and Solid Geometry.

Required of all Freshmen, first and second terms, 5 hours. Credit 120 hours.

3. *Solid Geometry*. In order to add interest to the study of this subject and to fix in the mind the propositions demonstrated, many numerical exercises are given.

Required of all Freshmen, third term. 5 hours. Credit 60 hours.

4. *Plane Trigonometry*. Some practical problems are given requiring students to use a surveyor's transit for measuring both horizontal and vertical angles. This course includes an introduction to spherical trigonometry.

Required of all Sophomores, first term, 5 hours. Credit 60 hours.

5. *Higher Algebra*. Indeterminate equations, undetermined coefficients, binomial theorem (any exponent), permutations and combinations, series, and theory of equations.

Required of Sophomore Mechanical Engineers, elective for all other students who have completed Mathematics 4, third term, 5 hours. Credit 60 hours.

6. *Analytic Geometry*. Loci and their equations, straight line and circle, transformation of co-ordinates, parabola, ellipse, hyperbola, general equation of the second degree, discussion of a few of the higher plane curves, and an introduction to geometry of three dimensions.

Required of Junior Mechanical Engineers, elective for all other students who have completed Mathematics 5, first term, 5 hours. Credit 60 hours.

7, 8. *Differential and Integral Calculus*. The topics treated are those usually taken up in accordance with well-established usage; and many practical problems from mechanics are solved by the student in order to maintain his interest, and to fix in his mind the principles which have been explained. Taylor's Calculus is the text-book used.

Required of Junior Mechanical Engineers, elective for all other students who have completed Mathematics 6, second and third terms, 5 hours. Credit 120 hours.

### Astronomy

1. *General Astronomy*. Not only astronomical facts and principles will be studied, but also the methods by which these facts have been ascertained. Night observations constitute an important part of the course. The text-book used is Young's General Astronomy.

Required of General and Domestic Science Juniors, elective for all other students who have completed Mathematics 4 and Physics 1, 2, and 3, 5 hours and 2 hours practice. Credit 72 hours.

2, 3. *General Astronomy*. Continuation of Astronomy 1, about half the time being devoted to night observations.

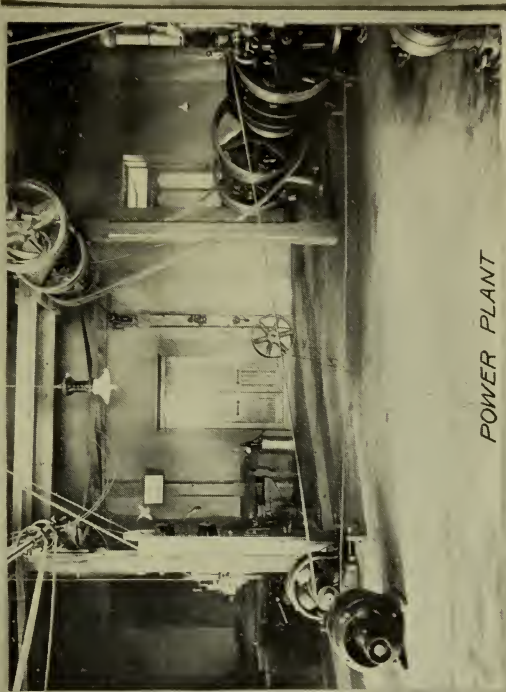
Required of General and Domestic Science Juniors, elective for all other students who have completed Astronomy 1, second and third terms, 2 hours or equivalent in practice. Credit 48 hours.

### Surveying

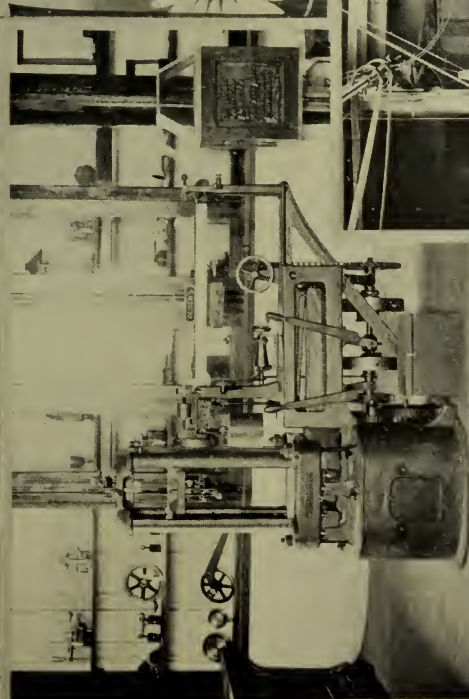
1, 2. The instruction in this subject will be such as to



POWER PLANT



MECHANICAL LABORATORY







WOOD SHOP



FORGE SHOP



FREEHAND DRAWING CLASS



render the students familiar with the principal instruments and methods used in plane and topographical surveying. Levels will be run, surveys made, notes plotted and areas computed. Students will have practice in determining the true meridian and latitude, by observations of the north star and of the sun.

Required of all (except Domestic Science) Sophomores, second term, 1 hour and 8 hours practice. Credit 60 hours.

#### Equipment

This department has a portable equatorial telescope with  $4\frac{1}{2}$  inch objective and magnifying powers ranging from 50 to 400; planetarium, star lantern with slides, star atlases, planisphere, 24 inch slated globe, trigonometer, Kennedy's dissected geometrical blocks; a surveyor's compass, two transits, one of which has a gradienter and solar attachment, engineer's level, plane table, protractors, aneroid barometer, optical square, planimeter, pantograph, chains, tapes, leveling rods, poles, pins, etc.

The department library contains many valuable books of reference, and several periodicals.

### MECHANICAL ENGINEERING

PROFESSOR MILLS

ASSISTANT PROFESSOR SAGE

MR. MACGREGOR

Instruction in this course is given by lectures, recitations and practice, so combined as to constitute a symmetrical elevate course of study. The endeavor is to provide the student with a broad foundation of general and theoretical knowledge, together with a liberal amount of practice in the line of his chosen profession.

Much time is necessarily devoted to higher mathematics and to technical subjects; yet certain fundamental studies, necessary to a broad and liberal education, such as physics, chemistry, languages, literature, and political economy are provided for.

The student is given a thorough training in the theoretical

branches underlying the science of machines, together with a clear understanding of the practical construction of mechanical devices.

Shop practice offers practical illustrations of the precepts taught in the class room, and is a most essential part of the Mechanical Engineering Course.

No attempt is made to teach trades, but the course in shop practice will furnish such training as will insure marked advancement subsequent to graduation.

The practice is supplemented by lectures on the care and use of the various tools, machines, and materials used in the mechanical engineering profession.

B, A. *Free-Hand Drawing.* Outline drawing from black-board, systematic drill in the execution of curves and scrolls, principles of perspective as applied in the drawing of simple type forms, shop models, etc., relative proportion and the study of the values of light and shade are developed in the execution of drawings of buildings, corners of rooms, etc., lettering and conventional ornament is taken up. The advanced work is given with particular reference to the course pursued by the student.

Required of all Senior Preparatory students and Practical Mechanics men, first and second terms, 2 hours practice.

1, 2, 3. *Mechanical Drawing.* Instruction in the use and care of drafting instruments, exercises in geometrical construction, lettering, plane projections, shading and coloring; followed by detail and assembled working drawings of machinery with tracings and blue prints therefrom.

Required of Mechanical Engineers, Freshmen, second and third term, Sophomores, second term, 4 hours practice. Credit 72 hours.

4, 5, 6. *Machine Design.* Mechanical Drawing is merged into Machine Design, of which it forms an important part, and affords constant opportunity for further practice in making drawings of standard types of machinery. The work in this subject consists chiefly in the design of the elements of machines, such as bolts, rivets and riveted joints, journals and bearings, pulleys, gears, etc.

Required of Mechanical Engineers, Sophomores, third term, Juniors, first term, Seniors, first and third term, 4 hours practice. Credit 72 hours.

7. *Descriptive Geometry.* In this subject the principles of orthographic projection, development of lines and surfaces, etc., are fully discussed in the class room; and a great variety of problems, illustrating both general and special cases are solved and constructed in the drafting room.

Required of Sophomore Mechanical Engineers, second term, 5 hours. Credit 60 hours.

8. *Elementary Mechanics.* In this subject, the general laws of statics and dynamics are studied with reference to solids, liquids, and gases; and the fundamental principles are applied to the solution of a wide range of problems.

Required of Junior Mechanical Engineers, first term, 4 hours. Credit 48 hours.

9. *Mechanism.* Under this head are studied the principles underlying the action of the elementary combinations of which all machines are composed; the communication of motion by gear-wheels, belts, cams, screws, linkwork, etc.

Required of Junior Mechanical Engineers, second term, 4 hours. Credit 48 hours.

10. *Strength of Materials.* This subject embraces a study of the characteristics, methods of manufacture, and useful properties of the various materials of construction; and a mathematical investigation of their strength, elasticity and other physical properties.

Required of Junior Mechanical Engineers, second term, 5 hours. Credit 60 hours.

11. *Engineering Structures.* This subject embraces a study of the design and construction of foundations and superstructures, the selection of materials, superintendence, specifications, etc.

Required of Junior Mechanical Engineers, third term, 5 hours. Credit 60 hours.

12. *Steam Boilers.* Under this head the principles underlying the construction of the various forms of steam boilers are studied. Attention is given to the various details in their design and operation, such as the size of flues, thickness of



plates, styles of riveting, bracing, the amount of grate and heating surfaces, etc.; also the various attachments.

Required of Junior Mechanical Engineers, third term, 5 hours. Credit 60 hours.

13. *Steam Engine.* The student makes a study of the general principles of the steam engine and of the various types in common use, and investigates the many problems relating to their structure and efficiency.

Required of Senior Mechanical Engineers, first term, 4 hours. Credit 48 hours.

14. *Hydraulics* includes the study and application of the principles of the subject to the various problems involved; such as the flow of water through orifices, short and long tubes, conduits, and in open channels; gauging streams, measurements of water power, etc.

Required of Senior Mechanical Engineers, second term, 5 hours. Credit 60 hours.

15. *Engine and Boiler Tests.* In this subject the student makes a study of the principles and the methods involved in determining the efficiency of engines and boilers and applies the same in the engineering laboratory.

Required of Senior Mechanical Engineers, second term, 4 hours practice. Credit 24 hours.

16. *Analytical Mechanics* embraces a study of the laws of equilibrium, motion, work and energy, as applied to particles and rigid bodies; also a study of the center of gravity and the moment of inertia.

Required of Senior Mechanical Engineers, third term, 5 hours. Credit 60 hours.

17. *In Electrical Engineering* the student is drilled in the fundamental principles of electric power generation and the application of electricity to lighting, street railway, and mining work.

Required of Senior Mechanical Engineers, third term, 5 hours. Credit 60 hours.

D, C. *Carpentry.* Reading drawings, sawing, planing, gauging, chiseling, boring, mortising, dove-tailing, fitting and joinery.

Required of all male Senior Preparatory students, first and second terms, 6 hours practice.



27. *Wood Turning.* Exercise in turning between centers, face-plate and chuck work, ornamental turning, finishing and polishing.

Required of Freshman Mechanical Engineers and Practical Mechanics men, first term, 6 hours practice. Credit 36 hours.

19, 20. *Forging.* Care of fire, heating, drawing out, bending, upsetting, swaging, welding, tempering, annealing, tool making and dressing, ornamental iron work.

Required of Freshman Mechanical Engineers and Practical Mechanics men, first and second terms, 4 and 6 hours practice respectively. Credit 60 hours.

21. *Advanced Carpentry.* Glue joints, panel work, tables, bookcases, etc. Timber framing, the construction of miniature buildings will be carried far enough to show the best methods of framing, "laying out," and cutting, hip, valley, or jack rafters.

Required of Freshmen Mechanical Engineers and Practical Mechanics men, third term, 6 hours practice. Credit 36 hours.

22. *Pattern Making.* Patterns and core boxes for the molding of simple machine parts.

Required of Sophomore Mechanical Engineers, first term, 10 hours practice. Credit 60 hours.

23. *Foundry Practice.* Mixing and tempering molding and core sands; molding in green and dry sand, skin drying, making and drying cores.

Required of Sophomore Mechanical Engineers, third term, 6 hours practice. Credit 36 hours.

24. *Bench Work in Iron.* Laying out work, chipping, filing, fitting, scraping, polishing, key-seating, drilling and tapping, hand work with machine tools.

Required of Junior Mechanical Engineers, first term, 6 hours practice. Credit 36 hours.

25, 26. *Machine Work.* Elementary machine-tool work with drill-press, planer, and lathe; production of finished machine elements.

Required of Senior Mechanical Engineers, first and second terms, 4 and 6 hours practice, respectively. Credit 60 hours.

### Equipment

The department has two commodious buildings devoted to its work. One has rooms for a forge shop, foundry, and storage; the other contains two recitation rooms and a hall, an engine and boiler room and rooms for wood work and machine work.

An excellent departmental library containing standard works pertaining to the engineering professions is accessible to students.

#### MECHANICAL AND ELECTRICAL LABORATORY.

The power equipment of the College consisting of the following engines, boilers, etc., affords opportunity for investigation, by the students, on the subject of steam and steam engine practice:—one 40 horse power tubular boiler, one 50 horse power Hoppes feed water heater and purifier, one duplex steam pump, one 30 horse power Weston automatic engine, one 8 horse power Shipman engine, one 13 horse power Priestman oil engine, one air pump and reservoir. The equipment also includes indicators for steam and oil engine testing, one standard steam gauge tester, two planimeters, a gas meter, one tachometer, one Olsen testing machine of 60,000 lbs. capacity for tension, compression, and transverse tests. A current meter, hook gauge, and other instruments are available for work in hydraulics.

One 12 horse power 250 volt dynamo, one 8 horse power motor with switch board instruments, one Weston portable ammeter, one Weston portable volt meter.

The Machine Shop has one 16-inch x 6 foot tool room lathe with compound rest and taper attachment, one 14-inch x 8 foot standard engine lathe, one 24-inch x 24-inch x 6 foot planer, one 22-inch power drill press, one sensitive drill, one gas pipe threading and cutting off machine, one improved double wheel emery grinder; also a large number and good assortment of drills, chucks, small tools, and machine attachments.

The Wood-working Shop contains fourteen benches, six 10-inch lathes, one 18-inch x 10 foot lathe, with over-hanging face-plate capable of turning work up to 80 inches in diameter, one combination rip and cross cut circular saw, one Fox trimmer, one large grindstone with Brown and Sharp frame, and a good supply of small tools and appliances.

In the forge shop are twelve forges of the latest down-draft model with improved underground arrangements for the blast and exhaust pipes, one forge being equipped with a hand blower.

Each forge is fitted with a full set of hammers, tongs, swages, fuller, etc. An 18-inch hand power drill press and a punching and shearing machine form a part of this equipment.

The foundry has a brass furnace, the usual small tools, and a number of flasks for moulding.

### **A Two Years' Course in Practical Mechanics**

The course is established for the benefit of those wishing to specialize in Manual Training operations or who have not the time to take the regular college course requiring from four to six years.

It is not the intention to teach trades in this course, but the advantages of the shops are offered free to young men who can not enter regularly in the college classes. Since instruction, rather than money making is the object, it can readily be seen that the work under skilled instructors has many advantages over the ordinary trade apprenticeship.

While there are no educational requirements for admission to this course, the student must be at least sixteen years of age, and show his fitness for the work. The amount of shop practice work in the first year is greatly in excess of that required of Freshmen in the Mechanical Engineering course, and is of the same grade. During the second year the student will be allowed to specialize in either wood or iron work and the drawing pertaining thereto.

**Two Years' Course in Practical Mechanics****FIRST YEAR**

FIRST TERM	SECOND TERM	THIRD TERM
Geom. Drawing, 3 P. Free Hand Drawing, 2 P. English, 4 or 5. Mathematics, 4 or 5. Elective, 4 or 5. Woodturning, 10 P.	Free Hand Drawing, 2 P. Geometrical Drawing, 3 P. Forging, 10 P. English, 4 or 5. Mathematics, 4 or 5. Elective 4 or 5.	Free Hand Drawing, 2 P. Mechanical Drawing, 3 P. Carpentry, 10 P. English, 4 or 5. Mathematics, 4 or 5. Elective, 4 or 5.

**SECOND YEAR**

FIRST TERM	SECOND TERM	THIRD TERM
One of: Carpentry, 10 P. Bench Work in Iron, 10 P. Pattern Making, 10 P. Machine Work, 10 P. Foundry Practice, 10 P. Drawing, 4 P. English, 4 or 5. Elective, 4 or 5. Mathematics, 4 or 5.	One of: Carpentry, 10 P. Forging, 10 P. Pattern Making, 10 P. Foundry Practice, 10 P. Drawing, 4 P. English, 4 or 5. Testing Materials, 4 P. Mathematics, 4 or 5. Elective, 3.	One of: Carpentry, 10 P. Forging, 10 P. Pattern Making, 10 P. Foundry Practice, 10 P. Machine Work, 10 P. Drawing, 4 P. English, 4 or 5. Mathematics, 4 or 5. Elective, 5.

**POLITICAL ECONOMY****PRESIDENT FOSTER**

1. In this subject, the student is made acquainted with the laws of production, the principles of money, foreign trade, tariff and taxation, the influences which affect exchange, the various theories of distribution and consumption, and the history of economic development.

Required of all Juniors (except Mechanical Engineers), second term, 4 hours. Credit 48 hours.

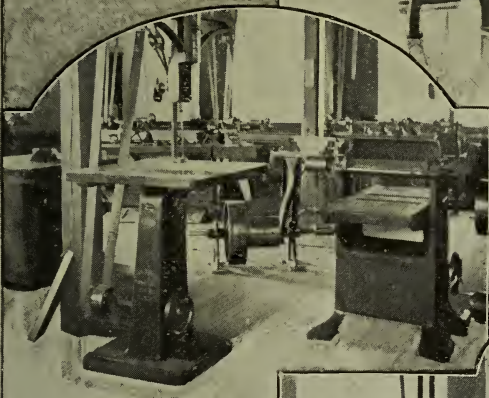
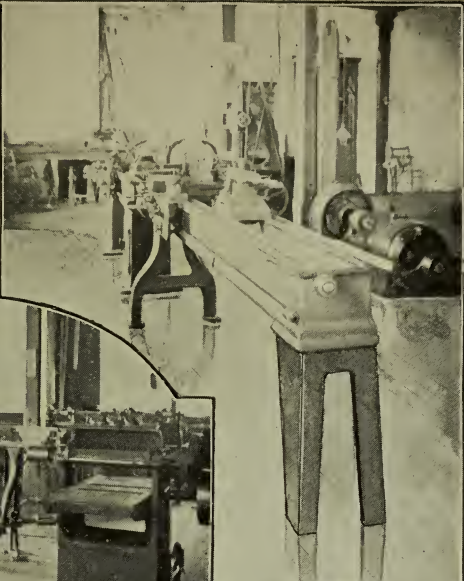
**SPANISH AND LATIN****PROFESSOR HOBLIT.****Spanish**

The proximity of this College to the Republic of Mexico, the fact that the majority of the inhabitants of the territory are Spanish speaking, and that Spanish is the native tongue of a large number of the pupils of the College, all combine to furnish an opportunity for study and proficiency in the Spanish language, of the most practical kind.

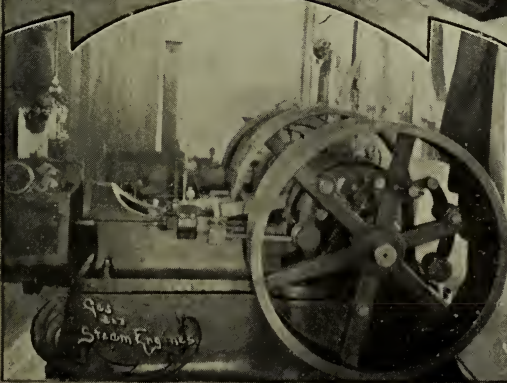
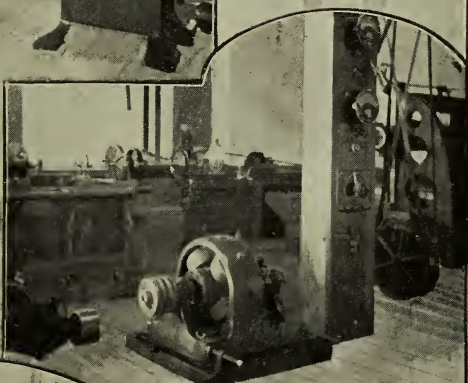
The acquisition of a thoroughly practical working knowl-



ENGINE, LATHES & PLANER



CARPENTER SHOP

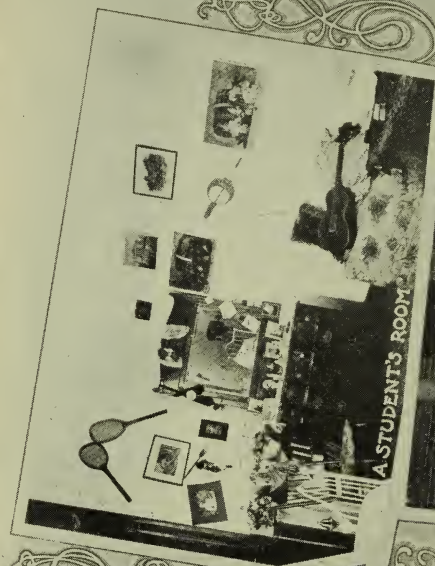


DYNAMO & SWITCH-BOARD

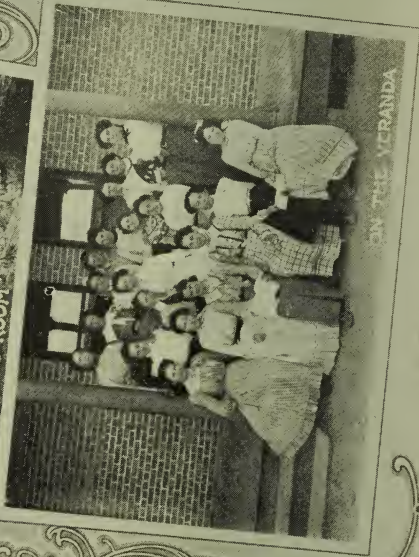
1883  
Steam Engine

Sutherland Eng. Co. Denver

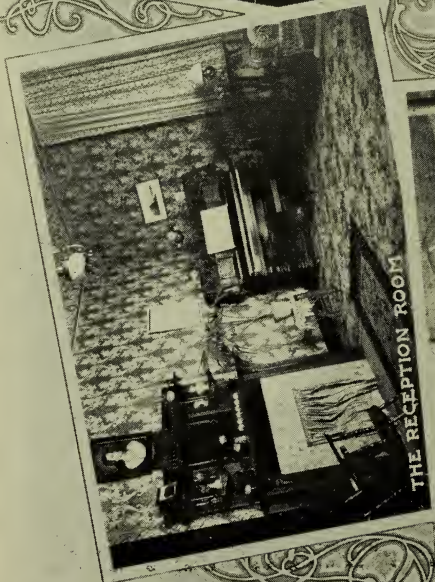




A STUDENT'S ROOM



ON THE VERANDA



THE RECEPTION ROOM



THE DINING HALL

# THE WOMAN'S HALL

edge of Spanish is aimed at, and to this end as soon as a sufficient vocabulary is acquired, class conversation is begun and continued throughout the whole course. The student is strongly urged to join the Liceo Cervantes, a literary society, the proceedings and exercises of which are carried on exclusively in Spanish. A number of students have derived great benefit by getting room-mates who speak Spanish, and thus availing themselves of constant exercise in that language.

1, 2, 3. *First term:* Marion and Garennes' *Introducción á la Lengua Castellana*. *Second term:* P. Isla's *Lesage's Historia de Gil Blas*, Irregular Verbs. *Third term:* *Historia de Gil Blas* concluded, Main Principles of Syntax. Translations, themes and conversations the entire year.

Required of all students who do not elect Latin, throughout the year, 5 hours. Credit 180 hours.

4, 5, 6. *First term:* Short Stories, Spanish Idioms. *Second term:* Modern Novels, Study of Synonyms. *Third term:* Poetry and Drama, Brief Survey of Spanish Literature. Translations, compositions and conversations the entire year.

Required of all students who do not elect Latin, except those of the Agricultural and Mechanical Engineering courses, throughout the year, 5 hours. Credit 180 hours.

7, 8, 9. Designed as a preparation for the commercial use of Spanish. *First term:* Newspaper Reading, Exercises in Spelling. *Second term:* Miscellaneous Sight Reading, Definition of Words. *Third term:* Commercial terms and Forms, Letter Writing. Translations, compositions and conversations the entire year.

Required of all students in Spanish Stenography, and elective for all other students, throughout the year, 5 hours. Credit 180 hours.

### Equipment

The department is supplied with much general reading matter, including Rivadeneyra's *Biblioteca de Autores Españoles*, and a considerable number of works of recent novelists, short story writers, poets and critics.

The equipment in reference books, dictionaries, technical and general, manuals of correspondence and business forms, is quite complete.

## SPANISH BY CORRESPONDENCE

For the convenience of those desiring to study Spanish, but who are not able to pursue the work at the college, a number of courses are offered by correspondence. Each course is intended to cover the ground of one term of college work and will be given that amount of credit whenever the student shall have satisfactorily completed the course.

### Plan of Work

Instruction sheets giving suggestions and assistance, and assigning tasks to be performed, are furnished by the instructor. At regular intervals the student mails to the instructor a recitation paper containing the tasks assigned in the instruction sheet, answers to the questions, and any additional questions concerning difficulties which he may have encountered in his study. This recitation paper is read and corrected by the instructor and returned to the student with such suggestions and criticisms as may be necessary.

### Courses

1. *Elementary Spanish.* This course is designed to give the student a mastery of the main principles of Spanish Grammar, and to enable him to read easy modern Spanish at sight and turn easy English into idiomatic Spanish.

2. *Modern Spanish Novels.* Careful reading of Valdés' *José* and Galdós' *Marianela*, with review of Grammar and compositions based on the texts.

3. *Spanish Poetry and Drama.* An introduction to Spanish versification. Reading of Iriarte's *Fábulas Literarias* and Gil y Zárate's *Guzmán el Bueno*, with compositions based on the texts.

4. *Commercial Spanish.* A practical course designed to fit students for clerical positions where Spanish is required. Reading of newspaper extracts and advertisements, study of business forms and terms, letter writing and other composition.

### Regulations

1. Correspondence courses may be begun at any time of

the year, but they must be completed within one year from the date of registration. Extension of time to the amount of three months will be granted only on account of sickness or other serious disability.

2. No fees will be refunded on account of a student's inability to continue a course for which he has registered.

3. The student must forward with each lesson sufficient postage to pay for return of same.

#### **Expenses, Books, etc.**

Each of the courses consists of forty written lessons, the tuition for each course, payable in advance, being \$15.00.

Students pay for their books, which may be ordered through the Department of Spanish of the College. Estimates and prices will be furnished on application.

#### **Latin**

The course in Latin extends through three years, the same work being accomplished as is usually done in courses of like duration. The Roman pronunciation is followed.

Latin and Spanish are optional with each other, all students being required to elect either the one or the other, except Mechanical Engineering students who will not have time for more than one year. A second year's work is elective with Agricultural students.

1, 2, 3. Collar and Daniell's First Year Latin; supplementary reading.

Required of those students who do not elect Spanish, throughout the year, 5 hours. Credit 180 hours.

4, 5, 6. Greenough, D'Ooge and Daniell's Second Year Latin; supplementary reading; D'Ooge's Latin Composition.

Required of those who do not elect Spanish, except Agricultural and Mechanical Engineering men, throughout the year, 5 hours. Credit 180 hours.

7, 8, 9. Cicero, Select Orations and Letters; Virgil's Aeneid; Prose Composition.

Elective to all students in college. Five hours per week throughout the year. Credit 180 hours.



## DEPARTMENT OF MILITARY SCIENCE AND TACTICS

PROFESSOR ALFRED S. FROST

Major U. S. Army, Ret.

(Former Colonel, 1st South Dakota Infantry, U. S. V.)

The primary object of this department is to furnish the country each year with a class of young men who are fitted to become efficient officers of volunteers in time of war.

For this reason, the department is fostered by the United States Government and practically maintained by it without expense to the college.

The professor is a regular army officer detailed by the President of the United States for this duty, and the equipment, amounting in value to about five thousand dollars, is loaned to the college by the War Department. This includes cannon, rifles, belts and cartridge boxes and a yearly allowance of ammunition for target practice.

The department offers the following comprehensive course:

(a) Practical:—

Infantry Drill Regulations, through the school of the battalion in close and extended order.

Advance and rear guards and outposts.

Marches.

The ceremonies of battalion review, inspection, parade, guard mounting, and escort of the colors.

Infantry target practice.

Instruction in first aid to the injured.

(b) Theoretical:—

The Infantry Drill Regulations covered by practical instruction.

The Manual of Guard Duty.

Small Arms Firing Regulations.

Ten lectures each year upon Military subjects, notes to be taken by the students and to be made the basis of subsequent recitations.

Also instruction in the bookkeeping of a Company of Infantry and the preparation of its reports, returns, etc.



Aside from its possible benefit to the country in the event of war, this course is of great and immediate benefit to the student.

The drills and exercises are mild forms of physical training, giving an erect and graceful carriage and correcting the bad habits of body to which students are prone. But their chief value to the individual lies in their mental and moral discipline; for, by their practice, he acquires the habit of self control, respect for authority and the fitness to exercise it.

Required of all male students of the institution, except Seniors and Graduate students, throughout the year, 4 hours. Credit 108 hours per year.

#### Uniform

There are two uniforms.

(a) The fatigue, or working uniform of moleskin and the hat known as the "Lion Special." This costs, complete, laid down at the College, nine dollars and fifty cents. This is compulsory and a deposit for the purchase is required of all new students taking this course.

(b) The dress uniform of gray cloth made after the West Point pattern. The suit and cap, complete, may be purchased for from thirteen to twenty-five dollars according to the purse of the wearer. Its purchase is optional with the student but the college recommends it as handsome and durable and appropriate for church and evening wear.

White Berlin gloves are worn with the above uniforms at drill. They cost twenty cents per pair and four pairs ought to last a year. They may be washed with the weekly laundry and two clean pairs are required per week.

**OFFICERS OF THE CADET BATTALION****COMPANY A.**

Captain, J. Maughs Brown  
 1st Lieut., Jay Stoneking  
 2d Lieut., John George Miller  
 1st Sergt., Charles Newcomb, Jr.  
 Corporal, Rex H. Hart  
 Corporal, Walter Miller  
 Corporal, Herbert Alleman  
 Corporal, Rafael Ramirez  
 Corporal, Arthur Fraker

**COMPANY B.**

Captain, William Pelphrey  
 1st Lieut., Earl Graham  
 2d Lieut., Theodore Rouault, Jr.  
 1st Sergt., Ralph Deemer  
 Corporal, John W. Bouts  
 Corporal, John D. Hughes  
 Corporal, Guy Given  
 Corporal, Cecil Hostetter  
 Corporal, Carlos Clancy

**BAND LEADER**

John Priest.

**COMMERCIAL TRAINING**

The college offers an elective course of five hours per week for one year, which is intended to give a thorough drill in all practical commercial calculations, in double-entry bookkeeping, business forms, and business customs.

1. *Commercial Arithmetic.* To enter this class applicants must pass an examination in the fundamental operations of arithmetic, including common and decimal fractions. Certificates will not be accepted in lieu of the examination.

Elective to all students who pass the required entrance examination, first term, 5 hours. Credit 60 hours.

2, 3. *Bookkeeping and Business Forms.* This course will give students such training in the essentials of double entry bookkeeping as will fit them to take an office position.

Elective to all students who have completed course 1 or its equivalent, second and third terms, 5 hours. Credit 120 hours.

**MUSIC.**

The policy of this institution is to maintain a good department of music which furnishes first class opportunity for instruction on the piano forte to those desiring it. This department is of necessity self supporting, and students will be charged for lessons at the rate of \$12 per term of twelve weeks, one lesson per week, for private lessons.

The institution is supplied with four pianos and no charge is made for the use of these instruments for practice of stu-

dents who are receiving instruction in the department. A chorus class, to which students of the institution will be admitted free of charge, is contemplated.

The authorities recognize the importance of musical training in the college and encourage the work of this department to the full extent of their power. In pursuance with this policy they have recently decided to credit regular work in music as other subjects are credited, and hereafter students taking one lesson per week, with its accompanying practice, will receive credit of 30 hours per term. Such credits are accepted as equivalent of the same number of hours in any other subject leading to a degree.

Parties interested in this subject may obtain more detailed information by applying to the teacher of music.

**STENOGRAPHY AND TYPEWRITING**

MR. LESTER, PRINCIPAL

PROFESSOR DAVIS

MR. MILLER

To meet the demand for instruction in stenography and typewriting, the above department is maintained in the College. To avoid interference with the regular college work, the work of this department is kept distinct, with certain requirements, and a definite course of study.

*Requirements for Admission.* For entrance to the course in English Stenography, students must be at least sixteen years of age. The average age of the enrollment in this department, however, is usually much higher than this. For last year, the average was  $22\frac{1}{2}$  years. Graduates of any commissioned high school in the Territory will be admitted without examination. All other applicants must show that they possess the required ability in English to enter the Freshman English class of the regular college course. See page 46

No guarantee is given to any student pursuing these courses that he will secure a position upon completion thereof. There is, however, little doubt that any student satisfactorily completing a required course will be able to take a position, and no competent graduate of the department has yet failed to do so.

*Equipment.* The department is equipped with sixteen typewriters, Remington and Smith Premier machines and an Oliver. There are also the necessary appliances for the required work under office practice.

It is important that students enter this department promptly at the beginning of the courses. It is seldom that one who enters late is able to complete the required work satisfactorily. No provision can be made for commencing the work of a course at any other time than as provided. The course of study in English Stenography is as follows:

**A Course in English Stenography**

FIRST TERM	SECOND TERM	THIRD TERM
Stenography 1, 10 hours. Typewriting 1, 5 hours. English 1, 5 hours.	Stenography 2, 10 hours. Typewriting 2, 5 hours. English 2, 5 hours.	Stenography 3, 10 hours. Typewriting 3, 5 hours. Office Practice, 5 hours.

*Stenography.* Stenography 1, in the first term of this course, is elementary in character, being a thorough study of the principles of shorthand. Stenography 2, in the second term, covers word signs and outline drill; and in the third term, Stenography 3 consists of advanced grade work, introducing a good deal of business and other dictation.

Text-books: Graham's Standard Phonography, revised edition; Graham's First and Second Readers and Amanuensis Practice.

*Typewriting.* This work covers fingering, touch, copying, letter-writing, legal and commercial forms, typewriting from dictation, mechanism and care of the machine, speed exercises, and transcription from shorthand notes. The four finger touch method is used, with blank key-board. Work absolutely free from errors is required. Opportunity is afforded students for work on both single and double key-board machines.

Text-book: Barnes' Complete Typewriting Instructor; Van Sant's Typewriting Charts.

*Office Practice.* This work, occurring in the third term, covers letter writing, indexing and filing, proof-reading, duplicating and manifoldng. A small charge is made for material used.

**English-Spanish Stenography**

The experience of past years has shown conclusively that a strong and growing demand exists for competent English-Spanish stenographers. The conditions existing in this locality and institution are so favorable for work in English-Spanish stenography that they may be said to be almost unique. The calls upon this College for such stenographers during the past few years have far exceeded the supply; although these calls come principally from Mexico, there is



an increasing demand in the United States and the newly acquired Spanish-speaking possessions, and it is believed that the business opportunities open to competent English-Spanish stenographers are most desirable.

For admission to this course students must show that they are prepared to complete the course within one year. To do this, some previous knowledge of both English shorthand and the Spanish language is desirable and usually necessary. The course in Spanish stenography is as follows:

#### A Course in Spanish Stenography

FIRST TERM	SECOND TERM	THIRD TERM
English 1, 5 hours Special Work, 5 hours Adv. Stenography 4, 5 hours Spanish 7, 5 hours Typewriting 4, 5 hours	English 2, 5 hours Spanish Stenog. 7, 5 hours Adv. Stenography 5, 5 hours Spanish 8, 5 hours Typewriting 5, 5 hours	English 3, 5 hours Spanish Stenog. 8, 5 hours Adv. Stenography 6, 5 hours Spanish 9, 5 hours Typewriting 6, 5 hours

*Stenography.* Stenography 4, 5 and 6 in this course is advanced work in English stenography, and consists of rapid dictation and business forms. Stenography 7 and 8 is the work in Spanish stenography, during which the principles of the text book used are first gone over, followed by work in Spanish dictation.

*Text-book:* Lester and Barker's English-Spanish Phonography.

*Special Work.* Under this head provision is made for special work in commercial English, to thoroughly train Spanish speaking students; or for special work in Spanish, in the Freshman or Sophomore classes, for those whose knowledge of that language is not sufficient.

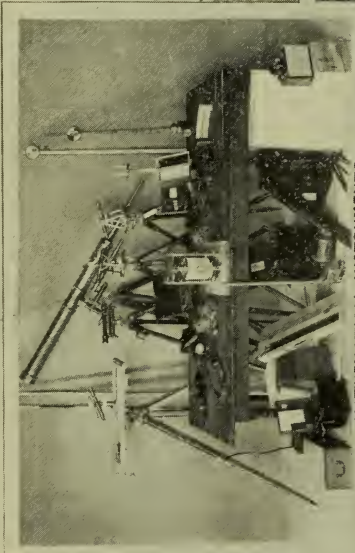
*Typewriting.* Typewriting 4, 5 and 6 is principally English and Spanish transcription work, with such advanced work as the time allotted will permit.



CLASS PICNIC



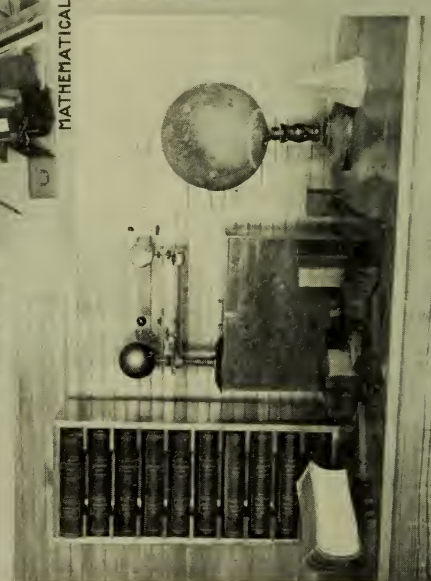
# DEPARTMENT OF STENOGRAPHY & TYPEWRITING.



MATHEMATICAL INSTRUMENTS



RELIEF MAPS



FOR THE PREPARATORY DEPARTMENT

**THE PREPARATORY SCHOOL**

PROFESSOR RICHARDS, PRINCIPAL

MISS COMBS

MISS BLAKESLEY

MISS SHIMER

This department has been planned primarily for young men and women who desire to prepare themselves for some of the regular courses of the college proper. Owing to the vast extent of the Territory and its scattered population, it has been almost impossible to secure good school privileges for every settlement, or even for some of the larger towns. This department, through its special and regular classes, enables pupils to supplement the deficiencies of their home schools, or to secure more complete and thorough instruction in the branches commonly taught in the grammar and high schools.

Besides its regular classes, there is a special class designed to meet the needs of those persons of somewhat mature age who, through lack of early opportunities, are not prepared to enter the regular collegiate or preparatory classes, but whose maturity of mind enables them to make more rapid progress than can be made in the regular preparatory classes; and of those Spanish-speaking students (still a large element in our population) whose educational qualifications would admit them to a regular class if their command of English were greater. The course of study for this class cannot be definitely outlined. Each pupil, however, will be prepared as quickly as possible to enter a regular class.

**Requirements for Admission**

For admission to the special class candidates must be at least sixteen years of age or must possess all the requirements for admission to a regular class, except a sufficient knowledge of the English language.

For admission to the lowest regular (C) class of the preparatory department candidates must give satisfactory evidence of having completed the work of the Fifth Grade as outlined



in the Course of study for the Public Schools of New Mexico and authorized by the Territorial Board of Education. This work is as follows:

1. Arithmetic.—An equivalent of the work covered by White's Complete Arithmetic to Common Fractions (p. 47).
2. Language.—An equivalent of the first half of Reed and Kellogg's Graded Lessons in English.
3. Geography.—Complete the study of the United States in Barnes' Complete Geography, or its equivalent.
4. Reading.—An equivalent of the work covered by McGuffey's Fourth Reader.
5. Spelling and Writing.—An elementary knowledge of these subjects.

For entrance to the higher classes candidates must give satisfactory evidence of having completed the work of grades below the class they seek to enter.

Strict adherence to these requirements will be enforced.

Instruction in free-hand drawing will be provided for all pupils. Some informal work will be done, also, in vocal music.

The aim of the department is to develop courteous manners and studious habits in the pupils. While strict discipline will be maintained, the students as far as possible, are placed on their honor and self-government is encouraged. This, we believe, will tend to develop those qualities necessary to good citizenship.



**COURSE OF STUDY OF THE PREPARATORY SCHOOL**

**Junior Preparatory Class**

**FIRST HALF YEAR**

**SECOND HALF YEAR.**

Algebra  
Grammar and Composition  
Arithmetic  
Civics  
Freehand Drawing  
Physics

Algebra  
Grammar and Composition  
Physiology  
Freehand Drawing  
Physical Geography

**Elementary Division**

**A CLASS**

**B CLASS**

Arithmetic  
Grammar and Composition  
United States History  
Reading  
Spelling  
Writing  
Freehand Drawing

Arithmetic  
Grammar and Composition  
Geography  
Reading  
Spelling  
Writing  
Freehand Drawing

**C CLASS**

**SPECIAL CLASS**

Arithmetic  
Grammar  
Geography  
Reading  
Spelling  
Writing  
Freehand Drawing

The course of study for this class can not be definitely outlined, but the work will be such as to prepare students for a regular class as quickly as possible.

**MATERIAL EQUIPMENT****The Main Building or College Hall**

The main building is a brick structure of two stories with stone basement surrounded by a cement area. It is trimmed with a gray stone and has a heavy rough stone foundation. It is well built and cost \$25,000. It contains thirteen rooms, all of which are furnished and in constant use. The building is well supplied with gas, water, and is lighted by electricity. On the first floor are the library and the president's and the registrar's offices, as well as a number of recitation rooms. On the second floor, besides several class rooms, is McFie hall, which is used for class excercises, lectures, and similar purposes, and will seat a large audience.

**The Library**

MISS BAKER

The college library comprises 9,000 books, 6,000 pamphlets and 1,500 public documents. In addition to these it subscribes to 91 magazines and several dailies, and receives numerous magazines and papers as gifts. This collection is grouped into general, department, and text-book libraries.

**General Library**

The general library is located in a well lighted and commodious room in the main building. It is the aim of the institution to make this room an attractive place for study and quiet reading. It is open from 8:15 a. m. to 5:00 p. m. on all college working days, and until noon on other days excepting Sundays and legal holidays.

This main library has in the neighborhood of 3,500 volumes for general use and about 1,000 volumes for reference work. The reference section consists of the best dictionaries, encyclopedias, etc., besides the files of magazines with the standard indexes. In addition to the customary reference books, files of the bulletins of the Agricultural stations throughout the United States are also accessible.

The books are classified by the Dewey system and are arranged on open shelves. They are further subdivided into

adult and juvenile. This personal access to the books is of especial benefit to our Spanish speaking students, as it gives them an opportunity to look books over before taking them home. The catalogue is the usual dictionary catalogue of authors, subjects, and titles arranged in one alphabet.

Subject to certain lenient restrictions, books may be drawn by any member of the college. Students are required to make a guarantee deposit with the registrar of \$2.50 preliminary to drawing either library or free text books. This amount is refunded at the end of the year on presenting to the registrar an order properly endorsed by the librarian. The rules governing the library may be found on pages 88-89.

A limited number of students desiring to help themselves may work out their fees in the library at the rate of ten cents per hour. Such students will be required to give a few additional hours in order to learn the duties assigned them.

#### **Department Libraries**

Each department has its own individual library which is open during the working hours of the department. Books may be drawn from these libraries by consulting the heads of the departments concerned. The departments subscribe to 41 magazines.

#### **Free Text-Book Library**

Text-books are furnished to all students after they have made a deposit of \$2.50 with the registrar. These books are drawn out upon written orders from the several instructors. Students are charged for unreasonable damage to all books while in their possession.

The following periodicals are either in the library or in the offices of the special departments:

*Agricultural Advertising.	*American Grange Bulletin.
*Agricultural Experiments.	American Journal of Psychology.
*Agricultural Epitomist.	American Machinist.
*American Agriculturist.	*American Poultry Journal.
*American Fertilizer.	*American Sheep Breeder.
American Amateur Photographer.	Analyst, London.
American Blacksmith.	Army and Navy Register.

\*Gifts.

- American Chemical Journal.  
 \*American Cultivator.  
 American Florist.  
 Astrophysical Journal.  
 Atlantic.  
 \*Beet Sugar Gazette.  
 Birds.  
 Book-keeper.  
 Bookman.  
 Botanical Gazette.  
 \*Breeders' Gazette.  
 Bulletin Torrey Botanical Club.  
 Business.  
 Catholic World.  
 Century.  
 Chemical News.  
 Correct English.  
 Cosmopolitan.  
 Country Life.  
 Critic.  
 \*Current Literature.  
 \*Cumulative Index to Periodicals.  
 Current History.  
 \*California Cultivator.  
 Cassier's.  
 \*Dairy, The  
 \*Dairy and Produce Review.  
 \*Dairy World.  
 \*Educational Review.  
 Electrical World and Engineer.  
 \*Elgin Dairy Report.  
 Engineer.  
 Engineering and Mining Journal.  
 Engineering Magazine.  
 Engineering News.  
 Etude.  
 \*Farm and Ranch.  
 \*Farm Field and Fireside.  
 \*Farm Journal.  
 \*Farm Poultry.  
 \*Farm Stock and Home.  
 \*Farmers' Call.  
 \*Farmers' Guide.  
 \*Farmers' Review.  
 \*Farmers' Voice.  
 \*Farmers' Wife.  
 Field and Farm.  
 \*Forestry and Irrigation.  
 Forum.  
 Gardening.  
 Harper's Bazar.  
 Harper's Monthly Magazine.  
 Harper's Weekly.  
 \*Holstein Friesian.  
 \*Hoard's Dairyman.  
 \*Homestead.  
 Le Bon Ton.  
 Library Journal.  
 Life.  
 Literary News.  
 Living Age.  
 \*Live Stock Journal.  
 \*Live Stock Report.  
 \*Louisiana Planter.  
 Manual Training Magazine.  
 Masters in Art.  
 Mathematical Gazette.  
 McClure's Magazine.  
 \*Mining and Scientific Press.  
 \*Mirror and Farmer.  
 Modern Priscilla.  
 Monthly Cumulative Book Index.  
 \*Nebraska Farmer.  
 North American Review.  
 \*Ohio Farmer.  
 Orange Judd Farmer.  
 \*Oregon Agriculturist.  
 Our Times.  
 Out West.  
 Outlook.  
 \*Pacific Fruit World.  
 Pacific Rural Press.  
 Phonographic Magazine.  
 Pittonia.  
 Plant World.  
 Popular Astronomy.  
 Popular Science Monthly.  
 Power.

- |                                    |                                    |
|------------------------------------|------------------------------------|
| *Indiana Farmer.                   | Rural New Yorker,                  |
| International Quarterly.           | *School Bulletin.                  |
| Irrigation Age.                    | Science.                           |
| *Journal of Agriculture.           | Scientific American & Supplement.  |
| Journal American Chemical Society. | Scribner's Magazine.               |
| Journal London Chemical Society.   | *Southern Farm Magazine.           |
| Journal of Education.              | *Steam Engineering.                |
| Journal of Pedagogy.               | Stenographer.                      |
| *Kansas Farmer.                    | *Student's Journal.                |
| *Kimball's Dairy Farmer.           | St. Nicholas.                      |
| Knowledge.                         | Success.                           |
| Ladies' Home Journal.              | Table Talk.                        |
| Pratt Institute Monthly.           | *Texas Farmer.                     |
| *Practical Engineer.               | Typewriter and Phonographic World. |
| *Practical Farmer.                 | United States Journal.             |
| *Prairie Farmer.                   | *Up to Date.                       |
| Public Opinion.                    | *West Virginia Farm Review.        |
| Publishers' Weekly.                | *Western Fruit Grower.             |
| Review of Reviews.                 | World's Work.                      |
| Rhodora.                           | Youth's Companion.                 |

The following news papers are regularly received and are placed on file in the library:

- |                            |                           |
|----------------------------|---------------------------|
| *Albuquerque Citizen.      | *Las Cruces Citizen.      |
| *Baltimore Weekly Sun.     | *Las Cruces Progress.     |
| *Capital, Santa Fe.        | *Las Vegas Optic.         |
| *Carlsbad Argus.           | *National Farmer.         |
| *Cerrillos Register.       | New York Herald.          |
| *Chicago Drover's Journal. | *New York Tribune Farmer. |
| Chicago Tribune.           | *Otero County Advertiser. |
| *Colfax County Stockman.   | *Pathfinder.              |
| *Daily Drover's Telegram.  | *Clay County Democrat.    |
| *Deming Graphic.           | *Raton Gazette.           |
| *El Fenix.                 | *Raton Range.             |
| *El Labrador.              | *Rio Grande Republican.   |
| *El Republicano.           | *Roswell Register.        |
| *El Tiempo.                | *Santa Rosa Star.         |
| *La Voz Publica.           | *Santa Fé New Mexican.    |
| *La Luz.                   |                           |

### Science Hall

This is a large two-story brick building, situated to the north of the Main building. It contains eleven large rooms, and five smaller ones, besides large hallways. The lower



floor is occupied by the departments of Chemistry and Domestic Science, while the upper floor furnishes quarters for the departments of Physics and Biology and Geology. All the class work of these departments is done in this building, and the Experiment Station work in chemistry, botany, and soil physics is carried on here.

#### **Engineering Buildings**

These buildings, two in number, are located south of the Main building. They comprise, besides two large recitation rooms and hall, commodious rooms for wood work, machine work, foundry, and blacksmithing, an electric light plant, and a 40-horse power steam plant. These buildings are well equipped for engineering work.

#### **Women's Hall**

This is a brick building, situated on the College Farm. It contains on the first floor a large dining hall, a large parlor, a smaller reception room, the matron's room, a kitchen, etc., and upstairs there are eleven well lighted and ventilated sleeping rooms, all nicely furnished. About thirty people can be accomodated in the building.

#### **Other Buildings**

Back of the main building are the feed rooms and horse sheds. These are for the horses of the students and professors.

An adobe farm building erected at a cost of about \$2,000 is located near the center of the farm. The greenhouse and the sheds for the storing of farm implements and machinery are located near the farm building. An adobe corral has recently been added to the farm equipment.

The last legislature made appropriations which are to be used as follows: (1) the girls' dormitory will be completed according to the original plan, thus giving accomodations for double the number of students, (2) the construction of a special library building designed to accommodate our ever growing and valuable library, (3) the building of an armory for the work of the military department, and (4) the beginning of a new main building. This building is to be designed to

furnish ample room for a large part of the class work of the institution for some time to come. These buildings are sadly needed now and the institution will be much better able to do its duty to the young people of the territory when they are complete.

### GENERAL INFORMATION

The College of Agriculture and Mechanic Arts offers a great deal to the young people of New Mexico. Its courses of study and equipment are now equal to those of similar colleges in most of the older states and students can get a very thorough training here in any of the leading lines of practical education. New schools generally make greater efforts than the older ones, and the energy put forth and the instruction given are often superior. There are a great number of students sent from various parts of the territory each year to eastern colleges. We ask parents who do this, to investigate this college; and we believe if they will do so, it will get a share of their patronage, and that our people will manifest, in an increasing degree, their appreciation of the bounty of the United States and of the territory here depensed. We know that this college is better fitted to do good work than some of the eastern schools patronized by our people.

Mesilla Park, N. M., is the postoffice and also the general freight and express office of the college.

There is now a good elementary public school at Mesilla Park, the course of study in which connects with that of the preparatory department of the college; so that parents who desire to live in the neighborhood of the college for the sake of giving their older children its educational advantages will also have at hand a good school for their younger children.

Strangers will find it more convenient to stop at Las Cruces, and go temporarily to some hotel. They should then report to the president, who will assist them in finding a boarding place.

*Students should be on hand the first day of the term. The necessity of this is too seldom realized. New students and those desiring re-examination should report on the day named for this work.*

### Fellowship

The board of regents determined in 1900 to establish one or more fellowships, of the annual value of \$300, open to graduates of the college, and in default of competent graduates who have specialized in the particular line of work required of the fellow, to graduates of other colleges. These fellowships will be tenable for one or two years, but not for a longer period, and will be awarded to promising graduates who desire to pursue their studies in one or more lines beyond the undergraduate curriculum, and who are willing and able to devote half of their time to assisting in the work of one of the departments of the college. The appointment will be made upon the joint recommendation of the head of the department in which the fellow is to serve and of the president of the college. A fellow will not be permitted to carry more than two full courses of study, without the express permission of the head of his department and the president of the college.

### Fees and Deposits

*Entrance Fee.* Each year all students, who are citizens of New Mexico are charged a fee of five dollars (\$5.00); students from other states or territories of the United States are charged a fee of five dollars (\$5.00) per term. Students who are not citizens of the United States are charged a tuition fee of seventeen dollars (\$17.00) per term, or fifty dollars (\$50.00) per year.

*Book Deposit.* All students are required, each year, to deposit two and one-half dollars (\$2.50) with the registrar, as a guarantee that the proper treatment will be given to college text-books, and other property lent to them. At the close of the year or whenever the student withdraws from college, his deposit, less charges for damage to or loss of college property, is returned to him. Students who are notoriously careless with their text-books may be required to increase their deposits.

*Chemistry Deposits.* Students in all chemistry, mineralogy and assaying courses (except Chemistry A) must have on

deposit with the registrar, at the beginning of each term, the sum of five dollars (\$5.00) to cover breakage of apparatus used in this work. Students in furnace assaying must, in like manner, have on deposit ten dollars (\$10.00) to cover cost of crucibles, scorifiers, and other apparatus used up or broken. At the end of the year or upon withdrawal, these deposits, less breakage, etc., will be returned.

*Chemistry Fee.* At the beginning of each term, each student taking furnace assaying will be charged a fee of five dollars (\$5.00), to cover cost of gasoline and fluxes used.

*Mechanical Engineering Deposits.* Students taking any practice work in the Engineering Department, will be required to deposit with the registrar, at the beginning of each year, five dollars (\$5.00) to cover breaking or damage, and must make additional deposits at any time, to meet similar expenses in excess of this amount. These deposits, less charges for breakage or damage, will be returned at the end of the year or upon withdrawal.

*Military Fee.* Each student who takes military tactics will be required to purchase a complete uniform when he commences this work. The regular fatigue uniform will cost \$10.50 complete. This includes suit, hat, and gloves as adopted for use of the cadets.

*Music.* Instruction in music is charged for by the lesson.

*Horse-stall Rent.* Twenty-five cents (25c.) per term is charged each student or teacher using a horse-stall. This fee is used to keep the sheds clean.

### Text Books

Text books are furnished by the college. They will either be sold to the student at cost, or lent. Students who are able should purchase their books. Many of them will be needed after leaving school, and they can be made to form the nucleus of a private library, which every student should be encouraged to collect.

### Stationery

As the college is nearly three miles distant from any store dealing in stationery, it has been found necessary for the accommodation of students to carry at the college a small line of articles, such as paper, pencils, pens, etc., which are sold to students, for cash only, at a small profit.

### Boarding

Although the college, as such, can do nothing towards furnishing board and rooms for men, the accommodations for all classes of students are becoming quite varied and ample: the college has attracted to its immediate vicinity private families, many of whom accommodate some students with board. The price for board, room, lights, etc., in families, varies from \$16 to \$25 per month; table board in families about \$15 per month. Not far from the College campus are cottages for rent. These are usually occupied by families who have moved in and taken up temporary residence for the purpose of educating their children. This is a very satisfactory solution of the boarding problem.

A boarding club for young men—a private enterprise, conducted by Mr. Charles L. Post, address, Mesilla Park—has been established. It is under the supervision of the faculty. The building is sufficient to room and board about forty students. Table board is also furnished to some who do not room in the building. So far as expenses are concerned, it is conducted on the co-operative plan. Rooms are furnished with study-tables; but students are expected to furnish their own bedsteads or cots, bedding, towels, etc. Rooms, however, will be fully furnished for those who desire it. The food is abundant, healthful and well-served. The cost for table board during the past year has averaged about \$15.00 per month. During the coming year, Mr. Post, who is a graduate of this college, will spend two hours each evening instructing those who wish to make up back work. He also expects to do some practical field work in surveying on Saturdays and will furnish work and instruction to a few men desiring it.



### The Woman's Hall

The Woman's Hall, situated on the College farm, will accommodate about thirty students. The price of board per calendar month, with room, light, heat, and the washing of a dozen pieces including house linen, is \$17.00 when two young ladies occupy a room, and \$16.00 when there are three in a room, payable in advance on the first of each month. The rooms are comfortably furnished, but each student must provide comforts, blankets, sheets, pillow-slips, towels, napkins, napkin ring, and two laundry bags. The student's name must be plainly marked on all the pieces.

The students are under the general supervision of the faculty, and in charge of the matron. For further particulars apply to the matron.

### Estimate of Necessary Expenses

Various college incidentals.....	\$ 10 00..	\$ 10 00
Nine months' board and lodging at \$15 to \$20	135 00 to	180 00
Laundry, per month at.....	9 00..	9 00
	<hr/>	<hr/>
	\$154 00 to	\$199 00
Male students who are required to take military tactics, for uniform.....		\$10 50

### Paid Labor

There is a considerable amount of labor on the farm, in the shops, and in the laboratories, that can be performed by students, and the policy is to give it to students rather than to others. Some students have been able to earn enough during the past year to pay their expenses; but those doing so have had constant employment in some subordinate position. The college can not undertake to furnish work for all students who wish it, or need it, in anything like sufficient amount to pay expenses; and even if it could, the student's time is needed chiefly for study, recitation and practice. Still, many worthy and industrious students pay a considerable part of their expenses by labor. Preference is given to those who are most trustworthy and meritorious, and who are regular and punctual in attendance, and correct in de-

portment. This labor is paid for at the rate of from  $7\frac{1}{2}$  to 20 cents per hour; but the faculty reserves the right to limit the amount of work any student may do.

### **Religion**

All students will be trained in the principles of morality, but no sectarian teaching will be tolerated in the college. Entire freedom of choice is given the students in selecting the church they will attend. Services are held at the following churches every Sunday: Roman Catholic, Presbyterian, Methodist and occasional services are conducted by the Baptists and Episcopalians. At the Presbyterian church are held meetings of the Young People's Society of Christian Endeavor. With the Methodist church is connected the Epworth League.

### **Discipline and Government**

It should be impressed upon the youth of New Mexico that by the creation of the College of Agriculture and Mechanic Arts there has been provided for them the fullest and best opportunities to secure a practical education. Students, who enjoy the advantages here offered, should realize that to forfeit these privileges on account of their misuse or abuse is a matter of the most serious concern to them. No elaborate code for the conduct of students is prescribed. The college rules are mainly for the purpose of facilitating the college business. As regards behavior, students are expected to conduct themselves as ladies and gentlemen. If, after a fair trial, the influence of any student is found to be detrimental to scholarship, morals, or good order, dismissal will follow.

For some time past, the students have been encouraged to take an active part in the administration of the college. The student body is organized, and there is a Student Conference Committee consisting of representatives from the student congress and from the faculty. This committee discusses informally all matters of student concern, whether proposed for discussion by the faculty or by the students, and recommends to the faculty and to the student congress such lines of action as seem to it to be wise.

### College Rules

As already stated, it is the policy of the faculty of this institution to deal with students in the most liberal manner possible. It is assumed that college students in an institution of this character are of sufficient age and advancement to know how to conduct themselves properly as ladies and gentlemen. In view of this policy this institution has no written rules relating to the conduct of students. Any violation of the usually accepted code of proper conduct is dealt with as the particular case may demand.

In order that students may know how to attend to the business requirements of the institution in regard to their studies, the library, college organizations, etc., quite a full list of rules of procedure are given below. These rules, while designed primarily for college students, apply, in many instances, to students of the preparatory department as well. In all special cases, the preparatory department has its own rules.

### A

#### Matriculation, Etc.

1. A student when first entering college, or at the first term of any subsequent year, must present himself

*To the President,*

who fills out the student's "admission card" and sends student with a "term assignment card"

*To the Course of Study Committee,*

which assigns studies, completes the "term card," and issues class cards to student, who goes

*To the Registrar,*

gives him the class cards, pays fees called for by his courses, takes receipt, and then reports

*To the Instructors,*

and shows each his receipt. If the receipt is satisfactory, the Instructor gives the student an order for textbooks, etc., and then assigns the lesson. The student then goes

*To the Librarian,*

and, showing her the book order, filled and signed by the

several Instructors, get books, and surrenders order to the Librarian.

2. At the beginning of the second and third terms, a college student who has previously entered will procure a term assignment card from the *Registrar*, who will fill out the personal part of the card before giving it to the student; and the student will then go to the *Course of Study Committee* and the procedure will from this point be the same as at the beginning of the year, except that the student need not go the Registrar again unless he is assigned to a course which requires the payment of a special fee or deposit.

3. *Students* must preserve the receipts they receive at the beginning of the year, and show them to their instructors at the beginning of each term as a condition of admission to classes. If the receipt is lost, a duplicate may be obtained from the Registrar upon payment of a fee of 10 cents

4. *An Instructor* must not admit a student to his class, even though he have a class card, unless he shows the Registrar's receipt or receipts for all fees and deposits required of members of the College taking the course in question.

## B

### Grading, Examination, and Classification of Students

1. The system of grading is on a scale of 100.

2. At the end of each term, unless special action be taken by the faculty to the contrary, examinations are held in all subjects, or parts of subjects, taught during that term.

3. In making up the term grade in any subject, in case an examination has been held, the average daily grade is added to the examination grade and the sum divided by two. In case no examination is held at the end of a term, the average daily grade is taken as the final mark for term.

4. The method of determining the average daily grade, except in the matter of absences, is left to the instructor in charge of the class.

5. In determining the average daily grade, an amount is deducted for unexcused absences proportional to the amount

of work missed; unless the absence occurs in the first or last week of the term, or in the week preceding or succeeding a vacation in which case it counts double. Excused absences count the same as those unexcused, unless the work missed is made up to the satisfaction of the instructor in charge.

6. Any student receiving an average daily grade of 85, or over, in any subject, may, at the discretion of the instructor in charge, have this mark taken as the final grade for the term, in that subject, without having to take an examination.

7. If a student receive a final term grade of 70 or over, in any subject, he shall be passed; otherwise he shall be conditioned.

8. (a). A student conditioned in any subject has a chance to remove his condition by taking a re-examination in the subject. If he fail in the re-examination, or fail to take the same at the specified time, credit for the work will only be given after he has repeated the subject in class and made a passing grade on the same.

(b). All re-examinations for failures in entrance examinations, or in studies during any year except the Senior, take place in the first week of the first term of the next year.

(c). All re-examinations for failures during the first two terms of the Senior year must occur before the beginning of the third term of that year.

9. If a student, at the end of any term, fail in every subject or in every subject save one he may be at once dropped to a lower class, or from college, as the faculty may decide.

10. Whenever a student, by action of the faculty, is put into a lower class, he may be required to repeat all the studies of that class, whether he has previously passed in them or not.

11. No student taking a regular course is allowed to take up any subject in that course until he has passed in all preceding work necessary to fit him for that subject. Neither



will such a student be excused from any prescribed work in that course except by special action of the faculty.

12. No special student is allowed to enter any class unless, in the opinion of the instructor in charge, he is thoroughly prepared in all necessary preceding branches.

13. In case of any conflict in the course of study, unless otherwise ordered by the faculty, the higher subject shall give way to the lower.

14. Regular college students are classified as Freshman, Sophomores, Juniors, or Seniors, according to the number of hours work they have completed. Thus if the number of hours required per week is 20, the number of weeks per year 36, and the number of years 4, then the minimum number of hours required for graduation would be  $20 \times 36 \times 4 = 2880$ . In this case, a student would be classified as a Freshman until he had completed 720 hours, and thereafter as a Sophomore until he has completed 1,440 hours, etc.

In the above scheme, two hours of drawing, laboratory work, shop practice, or field work, are counted as equivalent to one hour recitation.

15. (a) No grade from another school will be accepted as an equivalent of work in this institution unless said school ranks as high as this one, and then only by special action of the faculty.

(b) In all other cases, in which a student desires credit for work done elsewhere, the same will only be given after the student passes a satisfactory examination in this institution.

16. A record is kept of the work of each student, and at the end of each term, reports showing the grades, etc., of the different students, are sent to their parents or guardians.

### C

#### Graduation

1. Seniors having conditions at the beginning of the third term of the senior year will not be considered candidates for a degree.

2. A student, in order to graduate, must have completed the full amount of work included in one of the college courses

of study, or an equivalent of the same which has been accepted by the faculty.

3. Each candidate for graduation is required to prepare a thesis, which shall be passed upon by a committee consisting of the head of the department in which the work was done, the professor of English, and the president.

4. Any graduate may be required by the faculty to give an exercise on commencement day, consisting of an oration or an extract from or an abstract of the thesis.

5. Subjects for thesis must be presented to the faculty for approval not later than the end of the second term of the senior year.

6. All theses must be handed in for inspection by the committee referred to under section 3, before the beginning of the senior vacation, and the finished thesis must be filed with the registrar not later than the beginning of the second week of the senior vacation.

7. A thesis in order to be finally accepted, must be clearly written or type written, on good linen paper, size 8x10½ inches, bound, and a copy delivered to the registrar for permanent preservation.

8. Seniors are given a vacation during commencement week and the week immediately preceding.

## D

### Absence and Tardiness

1. A male student who is absent or tardy must state the reason for such absence or tardiness, to the different instructors concerned, the first time he meets said instructors in class thereafter. If no such statement is rendered the student will be marked zero for the work missed.

2. A female student must, in a similar manner, present to the different instructors concerned, not later than the second time she meets said instructors in class thereafter, a written statement from the dean of women as to whether an absence or tardiness has been satisfactorily explained.

3. Any student who is absent from a regular examination at which he should be present, shall be required to present

to the instructor in charge a satisfactory excuse for the same, in default of which said student shall at once be suspended from college.

## E

### The Library

1. Subject to the following rules, books and periodicals may be drawn from the library by making the necessary application to the librarian.

2. (a) Temporary assignment of library books may be made to the different departments of the institution by the librarian, subject to the approval of the president. Books so assigned may be recalled at any time.

(b) Indefinite assignment of library books and periodicals may be made to the different departments by the library committee, subject to the approval of the faculty. Books and periodicals so assigned can only be recalled by faculty action.

3. No library book, unless in a department library, may be kept out for more than two weeks consecutively. For each day overtime a fine of three cents is imposed.

4. Encyclopedias and similar works of reference must not be taken out of the library, except by special permission of the librarian.

5. (a) Current numbers of periodicals may not be kept out of the library longer than over night, except during the period from Friday evening to Monday morning. (b) The last seven issues of the dailies, the last four issues of the weeklies and the last two issues of the monthlies are considered current numbers.

6. Current numbers of periodicals may not be drawn sooner than one hour before the library is closed and must be returned by 9:00 a. m. of the day on which rule 5 calls for their return.

7. Periodicals, other than current numbers, will be governed by the same rules as library books.

8. No book or periodical assigned to any department may

be drawn without the express consent of the head of that department.

9. Fines will be imposed by the librarian for loss of, or unreasonable damage to, library books or periodicals.

## F

### College Organizations

1. The public exercises of all societies, classes, athletic teams, or other organizations connected with the college, are subject in time, place and character, to the approval of the faculty. All rooms assigned for the use of societies, or other organizations, shall be occupied subject to the faculty's control.

2. All societies, classes, athletic teams, or other organizations connected with the college, are required to notify the faculty in writing of all dates desired for public exercises. When possible, such notices shall be given at least two weeks before such exercises are to be given.

3. The faculty reserves the right of passing upon the constitution and by-laws, and all subsequent amendments to the same, of all societies organized in connection with the college.

## G

### Miscellaneous

1. (a) Stalls are provided for the horses of officers and students who ride or drive to the college. These stalls are rented at the beginning of each term, twenty-five cents per term being charged for each single, and fifty cents per term for each double stall; the amount to be paid in advance.

(b) The members of the faculty and other officers have first choice of stalls, and the Seniors, Juniors, Sophomores, Freshmen, students in the stenography course, preparatory students and special students, have choice of the remainder in the order named.

2. Carriages must be so arranged about the horse stalls that an open passage is left between the carriages and stalls, and horses must not be tied in places where they block the passage to the stalls.

3. The first Friday in May is a holiday set apart for athletic sports, and is known as Field Day.

4. The faculty may, at any time, deprive a student, whose college work is unsatisfactory, of the privilege of taking part in any team or public athletic work.

5. Smoking, or the carrying of lighted pipes, cigars, or cigarettes, is not permitted in or about any of the buildings of the college and experiment station.

### **DONATIONS AND CONCESSIONS**

During the past history of the college, a number of things have been given to the institution and exceptional concessions have been made upon the prices of material which it was necessary to buy. A complete list of such articles as had been received to date was published in last year's catalog. Appended will be found a list of all gifts received during the scholastic year of 1902-1903, for which the management of this institution wishes hereby to express its most sincere gratitude.

The various departments of the institution will gladly receive any gifts of material, specimens, books, separates, or apparatus which may be added to our museum, library, or teaching equipment, and will most willingly pay transportation if notified of the charges. Particularly is this true of mineralogical, geological, archæological, zoological, or botanical material from any part of the territory. Single specimens are of small value when thrown about the house, but a museum is made up of just such single specimens collected in one place and properly arranged. We need a good museum and already have some considerable collections to which we are adding all the time. We also have case room for such material, and men to take care of it properly. All communications on this subject should be addressed to the president and all material sent us should bear the name and address of the sender.

### **DONATIONS FOR 1902-1903**

#### **To the Library**

Contents Index, Vol. 1, and pamphlets.....University of California



Santa Biblia.....Prof. M. L. Hoblit  
2 copies Grand Cañon of Arizona.....Santa Fe R. R. Co.

**To the Department of Mechanical Engineering**

Model of Tappit Motion Steam Pump, in sections, and  
Complete Set of Drawings of the same  
The Deane Steam Pump Co., Holyoke, Mass.

**To the Chemical Department**

Specimen of Native Gold, "Old Abe" mine  
A. P. Green, White Oaks, N. M.  
Specimen of Native Silver, "Shamrock Mine"  
N. E. Stevens, Albuquerque, N. M.  
Specimen of Native Sulfur, from Popocatapetl, Mex..Prof. Chas. Mills

**To the Department of Agriculture and Horticulture**

1 Alpha No. 3 DeLaval Cream Separator  
Littleton Creamery Co., Denver, Colo.  
Agave plant.....Missouri Botanical Gardens  
15 gal. Calcothion Preparation  
Adler Color and Chemical Works, New York  
300 lbs. Nitrate of Soda and  
500 lbs. Thomas Phosphate Powder.....Prof. Wm. Myers, New York  
3.1 oz. Onion Seed, No. 9318 .....U. S. Dept. Agric.  
Plants of Tacsonia Millissima.....U. S. Dept. Agric.  
Three Varieties of Tobacco.....U. S. Dept. Agric.  
Scions of three Varieties of Apples.....U. S. Dept. Agric.  
1 lb. Seed Potatoes.....W. A. Burpees, Philadelphia, Pa.  
Two trees each of six varieties of Plums, F. T. Ramsey, Austin, Texas  
6 lbs. Seed Potatoes... ..Mr. Wilson, Roswell, N. M.  
Three varieties of Seed Potatoes  
Prof. Geo. O. Greene, Kansas Agricultural College

**To the Department of Mathematics and Astronomy**

Manual of Surveying Instructions, 1902, and  
Manual of Mineral Land Surveys, 1902,  
Surveyor General Llewellyn, Santa Fe, N. M.

**To the Department of Biology and Geology**

Specimen of Amonite, from Mexico...R. L. Young, Las Cruces, N. M.  
Living specimen of *Scops tricopsis*...J. K. Metcalfe, Silver City, N. M.  
Prepared skin of Sea Gull.....Robt. J. Metcalfe, Silver City, N. M.  
Specimen of Black-crowned Night Heron  
Herbert Stewart, Mesilla Park, N. M.  
6 Books and 30 Pamphlets on Biological Subjects, mainly Ornithol-  
ogical, and  
A typewritten copy of Birtwell's Field Notes on New Mexican Birds,  
Mrs. Olivia M. Birtwell, Albuquerque, N. M.

Photograph of Gila Monster, ..... L. C. McGrath, Lordsburg, N. M.  
25 botanical specimens, ... Prof. T. D. A. Cockerell, Las Vegas, N. M.

## STUDENT ORGANIZATIONS

### The Student Congress

This is an organization of the students of the institution which is especially designed to promote "self-government," and is encouraged by the Faculty for this reason only. The opinions and desires of this Congress usually receive consideration by the Faculty on matters relating to the welfare of the students, although the Faculty uses its best judgment as to when it shall consult the Congress. The power delegated to the Congress is only advisory, and in order to receive any consideration, its recommendations must be presented to the Faculty through the Student Conference Committee. This committee is always ready to meet the executive committee of the Congress, to consider the wishes of the students, and reports all such requests, with their recommendations, to the Faculty for action.

All students of the institution are members of the Student Congress. The members of the executive committee are elected each term, and are as follows: President, secretary, and two delegates from each of the following classes; Senior, Junior, Sophomore, Freshman, Stenography, and Senior Preparatory. The officers for the third term are:

Reginald Hart.....President.

Fannie Ford.....Secretary.

### The Columbian Literary Society

The society was organized October 25, 1891, under the name of Alpha Chi. In 1892 this was changed to Columbian, since which time the society has made steady and prosperous growth. Until about the middle of 1894-5 only men were admitted as members, but since that time women have had equal membership privileges. The object of the society is to promote and encourage conscientious and practical literary and musical work by readings, essays, papers, debates, vocal and instrumental music, and such other exercises as the committee on program may prescribe. Each year the society gives a public entertainment, generally of a dramatic character, and the drill and training is of great value to those who

take part. The self-possession, knowledge of parliamentary law, and skill in debate, which faithful members of this society gain, are of inestimable value to them in after life.

To be eligible to membership a student must be pursuing work in (1) any of the regular four year college courses, (2) either of the two year short courses, or (3) either of the stenography courses. A fee of two dollars is charged each new member, which fee admits him to the society and gives him one year's subscription to the college paper. Dues of fifty cents are paid each succeeding term. Attendance on all regular meetings is obligatory, and non-performance of duty is punishable by fine.

Regular meetings are held on Friday afternoon of each week and an evening meetings is held on the second Friday of each month. Visitors are allowed during the literary part of the meetings. Officers are elected at the beginning of each term. The officers for the third term are:

Maude E. McFie.....	President
Will Pelphrey.....	Vice-President
Annis Ford.....	Recording Secretary
Rowena Mott .....	Corresponding Secretary
Phillis Deemer.....	Treasurer
John Hughes.....	Librarian
Orrick Metcalfe.....	Critic
Pinckney Ford.....	Vice-Critic
Orrick Metcalfe.....	Marshal
Fannie Ford	} .....Literary Committee
Anna Baker	
Stanley Macgregor	
Archie Brown	} .....Executive Committee
Rowena Mott	
Lute Foster	

#### El Liceo Cervantes

This is a literary society composed of students and others interested in the study of Spanish. The motto, "El que quiere hablar bien, debe principiar por hablar mal," indicates the spirit of the society, which encourages the falter-

ing efforts of beginners, at the same time setting before them the more successful performances of advanced students.

Meetings are held every Wednesday afternoon, and essays, readings, debates, songs, discussions, etc., are rendered, all in Spanish. A fine is imposed upon any one speaking English during a meeting without permission from the President.

The society, assisted by friends, gave a concert and Spanish play in Las Cruces, in the Spring term of the year just closed.

The colors of the society are crimson and gold, and a neat emblematic pin has been adopted.

The prospects for permanence and much good work in the years to come are good.

The officers for the Spring term of 1903 are:

L. D. Valdez.....	Presidente
Maude McFie.....	Vice Presidente
W. P. Lapoint.....	Secretario
M. L. Hoblit.....	Tesorero
A. Reza.....	Crítico
Flora Evans.....	Vice Crítico
Ralph Deemer.....	Censor Morum
J. Calderon	} .....Comité de Progama
W. P. Lapoint	
E. Ornelas	

### The Collegian

The New Mexico Collegian is the name given to the paper published by the Columbian Literary Society. It is a monthly publication devoted to the chronicling of College events and happenings—locally, socially, and of a literary character, and contains from 30 to 40 pages. The entire management is taken by those students who are members of the C. L. S. and the staff is elected at the beginning of each term so that as many students as possible may have the practical experience in journalistic work. At the end of the year a souvenir Commencement number is issued, replete with pictures, local matter and special articles of interest to



the students and their friends. The subscription list includes practically all the students of the college, the alumni, and a large number of outside friends.

Essays and literary compositions of special value written by any student in connection with his college work are published in the Collegian, and this fact tends to make the students strive to do good work. The expenses of publication are paid from the money received from advertisements and subscriptions. The training in finance and business methods which this gives to the students, is of inestimable value.

#### Staff

The staff for the third term of 1902-3 is as follows:

Clarence D. Case.....	Editor in Chief
Pinckney Ford.....	Assistant Editor
Orrick Metcalfe.....	Local Editor
Fannie Ford.....	Social Editor
Lute Foster.....	Exchange Editor
Walter Goebel.....	Athletic Editor
C. L. Post.....	Alumni Editor
John D. Hughes.....	Business Manager
C. L. Newcomb, Jr.....	Assistant Manager

#### Athletic Association

Athletics have always been a prominent feature in the student life of this institution. The association was organized in 1893 and from that time to the present its growth has been steady and sound. The efficiency of the association is shown in its work. All but one of the territorial track athletic records are held by this college. Until recently the work has been confined at home but this will no longer be the case as the other institutions are now putting teams in the field. An Intercollegiate Athletic Association was formed last year which is all ready bearing fruit. The first meet under its direction was held here last June—this school carrying off the honors. A second will be held in Albuquerque in May of this year.

Much is expected of athletics in the future as the association is on a firmer footing than ever in its history. The new

constitution recently adopted to meet the changed conditions puts the association on a firmer and surer standing. The officers, elected annually by the association as a whole form what is known as the Athletic Board. Under the direction of this Board all athletics are controlled, all expenditures are approved and checked. One thing to the credit of the organization is that it has not failed to meet its obligations and is extremely careful in contracting same. A new feature of the constitution is the formation of an Advisory Board composed of the Athletic Board, Team Managers, Faculty Athletic Committee, and two resident graduates. Much benefit is expected to result from the work of this body.

The College campus is probably the best in the territory; it is excellently situated and equipped with good fields for foot ball, base ball, tennis courts, a quarter mile track and a 220 straightaway, etc.

The various teams that represent the College under the direction of the association are among the strongest of the territory. This year the foot ball team was scored upon but once; the basket ball team holds the territorial championship, having won every game played; the prospects for a winning base ball team was never better, and we undoubtedly have the best track men in this section of the southwest.

A member of the association has access to foot ball and base ball suits, tennis courts and balls, the usual outfit for field sports, and a shower bath on the grounds.

The cost of membership is, for men, an admission fee of one dollar (\$1.00), a monthly assessment of 25c, while for women the charges are half this amount. Quite a few of the members are girls who take active part in tennis and basket ball.

The officers of the association are:

Will Pelphey .....	President
Ralph Deemer .....	Vice-President
Maude E. McFie .....	Secretary
U. G. Brown .....	Treasurer
C. T. Hagery .....	Auditor

J. O. Miller.....General Manager  
 Oscar C. Snow, B.S. '94 Member Advisory Board  
 J.S. Macgregor, B.S. '02 Member Advisory Board

## ALUMNI

### Officers of Alumni Association

FOR 1902-1903.

President.....George M. Williams  
 First Vice-President.....Frances French  
 Second Vice-President.....I. H. Stanley  
 Secretary.....Elizabeth C. Foster  
 Treasurer.....Charles L. Post

### Class of 1894

Fabian Garcia, B. S., Assistant Professor of Horticulture and Horticulturist to the Experiment Station, New Mexico College of Agriculture and Mechanic Arts, Mesilla Park, New Mexico.

Mrs. Agnes Herbert, (née Williams), B. S., Housewife, Hondo, New Mexico.

R. Roy Larkin, B. S., Principal Public Schools, Gallup, New Mexico.

Lamuel C. McGrath, B. S., Merchant, Lordsburg, New Mexico.

Oscar C. Snow, B. S., Ranchman, Mesilla Park, New Mexico.

### Class of 1895

Mrs. Jessie Rhodes, (née Casad), B. S., Housewife, El Oro, D. F., Mexico.

### Class of 1896

Mae Gilmore, B. S., Alto, New Mexico.

Alfred M. Holt, M. S. Deceased, 1901.

Albert H. Peterson, B. S.; Mechanic, Chicago, Ill.

Clarence E. Rhodes, B. S., with American Mining Co., El Oro, D. F., Mexico.

### Class of 1897

Joseph F. Bennett, Jr., M. S., with the Sullivan Machinery Co., El Paso, Texas.

Elgin B. Holt, B. S., St. Louis, Mo.

Arthur E. Williams, B. S., County Surveyor Lincoln Co.,  
Lincoln, N. M.

**Class of 1898**

Edwin E. Casey, B. S., U. S. V. Deceased, 1898.

Daval G. Cravens, B. S., Master of Mathematics and Spanish,  
St. Alban's School, Radford, Va.

Charles E. Mead, B. S., Druggist, San Marcial, N. M.

Iva R. Shallenberger, (née Mead), B. S., Housewife, Albuquerque, N. M.

Isaac H. Stanley, B. S., Pinos Altos, N. M.

William A. Sutherland, B. S., U. S. Civil Service, Manila,  
P. I.

Lottie Sweet, B. S., Teacher, Las Cruces, N. M.

George M. Williams, B. S., Ranchman, Las Cruces, N. M.

**Class of 1899**

Edward J. Coe, B. S., County School Superintendent, Lincoln Co., Lincoln, N. M.

Walter E. Holt, B. S., U. S. Customs Service, El Paso, Tex.

John D. Tinsley, B. S., Professor of Physics and Soil Physicist,  
Vice Director of the Exper. Sta., N. M. College of A. and M. Arts,  
Mesilla Park, N. M.

**Class of 1900**

William Cory Meeker, B. S., Clifton, Arizona.

Charles Lewis Post, M. S., Assistant in Chemical Dept.,  
N. M. College of A. and M. Arts, Mesilla Park, N. M.

Archie Bruce Sage, B. S., Assistant Professor in Mechanical Engineering,  
N. M. College of A. and M. Arts, Mesilla Park, N. M.

Halbert E. P. Thomas, B. S., Tucson, Arizona.

**Class of 1901**

Leah Nora Newberry, B. S., Teacher, Las Cruces, N. M.

Minnie Wilson Sutherland (née Newberry), B. S., Housewife,  
Manila, P. I.

Alfredo Marcos Sanchez, B. S., Assistant in Division of Soils,  
U. S. Dept. Agric., Washington, D. C.

Matthew Steel, M. S., Alamogordo, N. M.

**Class of 1902**

Theron Catlin Bennett, B. S., Merchant, Pierce City, Mo.

Elizabeth Coger, (née Coleman), B. S., Housewife, Alamogordo, N. M.

Elizabeth C. Foster, B. S., Las Cruces, N. M.

Frances French, B. S., Las Cruces, N. M.

James Stanislaus Macgregor, B. S., Assistant in Mechanical Engineering, N. M. College of A. and M. Arts, Mesilla Park, N. M.



# CATALOG OF STUDENTS

## Senior

Ford, Fannie.....	Las Cruces
McFie, Maude Elizabeth.....	Santa Fé
Metcalf, Orrick Baylor .....	Silver City
Metcalf, Robert James .....	Silver City
Mott, Rowena.....	Las Cruces
Nelson, Ina Mae.....	Lake Valley

## Junior

Case, Lauren W .....	Attica, Ind.
Foster, Lute.....	Las Cruces
Hoblitt, Mrs. Orpha.....	Mesilla Park
Nabours, Benjamin F.....	White Oaks

## Sophomore

Brown, John Maughs .....	Las Cruces
Foster, Florence.....	Las Cruces
Freeman, Annie M.....	Berino
Harney, Annetta May.....	Cerrillos
Hart, Reginald H.....	El Paso, Tex.
Hughes, John David.....	Albuquerque
Newcomb, Bessie S.....	Mesilla Park
Ornelas, Efrén.....	Chihuahua, Mexico
Ramirez, Rafael.....	Mesilla Park

## Freshmen

Blinn, Mary .....	Kelly
Blinn, Merle A.....	Kelly
Bouts, John W .....	Mesilla Park
Brown, Archie.....	Gallup
Brown, Ulysses.....	Gallup
Coleman, Ruth .....	Mesilla Park
Ford, Annis B.....	Las Cruces
Galles, Georgia.....	Las Cruces
Graham, Earl A.....	Mesilla Park
Larrazolo, John B.....	Las Vegas
Miller, Jno. Geo.....	Santa Fé
Neal, Homer.....	Mesilla Park
Newberry, H. Clay .....	Mesilla Park
Pelphrey, William H ...	Alamogordo
Poe, Oscar L ...	Mesilla Park
Rigney, Alma.....	Belen

## Special

Amador, Juliette J .....	Las Cruces
Bevans, Henry .....	Mesilla Park

Crosby, William.....	El Paso, Tex.
Deemer, Ralph, B.....	Mesilla Park
Deemer, Phillis B.....	Mesilla Park
Given, Guy C.....	Hillsboro
Jewett, C. W.....	Lawrence, Kansas
Lane, John H.....	White Oaks
Lapoint, William.....	Las Cruces
Llewellyn, Gladys.....	Las Cruces
Pequignot, Cecilia N.....	Philadelphia, Pa.
Quintero, Jose.....	Las Cruces
Scoggins, Beulah.....	Mesilla Park
Swing, S. Walter.....	Coatesville, Pa.
Stivers, Jos. W.....	Raton
Varela, Miguel M.....	Chihuahua, Mexico

### Practical Mechanics

Angel, Ignacio.....	Las Cruces
Balizan, Estanislado.....	Las Cruces
Banegas, Febronio.....	Las Cruces
Barela, Juan M.....	Las Cruces
Berdugo, Juan.....	Mesilla
Bloodgood, Dean W. A.....	Kingston
Endicott, William.....	Lake Valley
Goebel, Walter E.....	Belen
Gonzales, Jesus.....	Las Cruces
Gonzales, Vidal.....	Mesilla Park
Goodin, Frank M.....	White Oaks
Grijalba, Marcos.....	Arroyo Bonito
Hitchcock, James E.....	San Marcial
Herrera, Ramon.....	Las Cruces
Isaacks, William F.....	Las Cruces
Lowe, Joseph W.....	Las Cruces
Lucero, Juan.....	Las Cruces
Luna, Julian F.....	Limitar
Mayo, Glover.....	San Pedro
Miller, Bernard.....	Cliff
Miller, Walter L.....	Santa Fé
Molina, Maximiliano.....	Las Cruces
Nattress, Chas. H.....	San Marcial
Padilla, Eugenio.....	Las Cruces
Parks, Harry L.....	Lake Valley
Peña, Rafael.....	Las Cruces
Pisaña, Concepción.....	Mesilla
Priest, John E.....	Rincon
Raff, John B.....	Los Lunas

Randall, Claude.....	Deming
Randolph, John... ..	Jennings, La.
Rouault, Jr., Theodore.....	Las Cruces
Sarabia, Carlos.....	Las Cruces
Salcido, Pablo .....	Las Cruces
Serna, Patricio.....	Mesilla
Serna, Pedro.....	Las Cruces
Soto, Carlos.....	Las Cruces
Trujillo, Miguel.....	Las Cruces
Wallace, Harry.....	Metcalfe, Ariz.

### Two Year's Course in Agriculture

Case, Clarence D.....	Attica, Ind.
Newcomb, Jr., Chas. L .....	Holyoke, Mass.
Steiger, Ralph.....	Holyoke, Mass.

### Stenography

Alexander, Cecil.....	Socorro
Alexander, Lolita.....	Socorro
Baker, Anna T.....	Troy, N. Y.
Bloom, Lansing B.....	Auburn, N. Y.
Bragg, L. Leona.....	Mesilla Park
Calderon, José.....	Chihuahua, Mexico
Chipman, Irene.....	Alamogordo
Clancy, Carlos C.....	Puerto de Luna
Fredrickson, Estrid.....	Albuquerque
Hamilton, Richard.....	White Oaks
Johnson, Jean R.....	Mesilla Park
Mejia, Albino.....	Solomonville, Ariz.
Molinar, Rafael S.....	Chihuahua, Mexico
Myers, Sarah.....	Albuquerque
Newton, Nellie Olena....	Mesilla Park
Olinger, Robert W.....	Mesilla Park
Orr, Blanche.....	Hanover
Reza, Adolfo S.....	Las Cruces
Reid, J. Rufus .....	San Antonio
Valdez, Louis D.....	Las Cruces
Weinman, Walter.....	Albuquerque

## PREPARATORY SCHOOL

### Senior Preparatory

Ascarate, Nemecia.....	Las Cruces
Dessauer, Philip E.....	Las Cruces
Freeman, John J.....	Anthony
Graham, Allen Givins.....	Mesilla Park
Hostetter, Cecil.....	Las Cruces

Hostetter Hazel.....	Las Cruces
Lockwood, Kent.....	Lake Valley
Nabours, Bessie L.....	White Oaks
Nevares, Jesus F.....	Las Cruces
Payne, Chester.....	El Paso, Texas
Pearson, Trust.....	Lordsburg
Stoneking, Jay B.....	El Paso, Texas
Taliaferro, Richard.....	White Oaks
Yoast, Irving H.....	Las Cruces

### Junior Preparatory

Aldrich, Ray.....	Gallup
Carrera, Theolinda.....	Las Cruces
Chaves, Manuel.....	Mesilla
Clark, Ethel.....	Richardson
Endicott, William.....	Lake Valley
Evans, Flora L.....	Ysleta, Texas
Ford, Alice.....	Las Cruces
Ford, Lela R.....	Las Cruces
Gilliam, Rex.....	Mesilla Park
Haworth, Lauren.....	Bangor, Iowa
Isaacks, Coila N.....	Las Cruces
Llewellyn, Ida.....	Las Cruces
Newcomb, Alice J.....	Mesilla Park
Newton, Fred.....	Mesilla Park
Opgenorth, Henry.....	Hillsboro
Parks, Harry L.....	Lake Valley.
Poe, James R.....	Mesilla Park
Quintero, Fernando R.....	Las Cruces
Ramirez, Juan M.....	Las Cruces
Steel, James A.....	Las Cruces
Sweet, Jacob A.....	Las Cruces

### A Class

Alleman, Herbert N.....	Chihuahua, Mexico
Cadwallader, Edgar E.....	Highrolls
Coleman, Daniel.....	Mesilla Park
Exter, Simeon.....	Rosdale
Foster, Ethel.....	Las Cruces
Garrett, D. Poe.....	El Paso, Texas
Gird, Benton B.....	Alamogordo
Hallock, Kathryn.....	Las Cruces
Kaune, Alice.....	Santa Fé
Lucero, Francisco F.....	Las Cruces
Lucero, Miguel J.....	Mesilla
McFie, Mary I.....	Santa Fé

McLean, John.....	Metcalf, Arizona
Nabours, Myrtle.....	Estey
Parker, Edith W.....	White Oaks
Sampson, Irving.....	Las Cruces
Scoggins, Clifford.....	Mesilla Park
Stewart, Herbert.....	Mesilla Park
Uranga, Armando R.....	Mesilla
Wade, Edward C. Jr.....	Las Cruces
Yoast, Mamie E.....	Las Cruces

### B Class

Ames, Walter.....	Las Cruces
Angel, Agapito.....	Las Cruces
Angel, Ygnacio.....	Las Cruces
Baker, Stuart K.....	Las Cruces
Burke, Edna.....	Mesilla Park
Carrera, Emil P.....	Las Cruces
Costales, Tillie H.....	Las Cruces
Deemer, Dixor.....	Mesilla Park
Foster, Doris.....	Las Cruces
Fountain, Jr., Abert J.....	Mesilla
Fraker, Arthur.....	Ocate
Guerra, Juan G.....	Mesilla
Issacks, Emmitt.....	Las Cruces
Llewellyn, Jr., William H. H.....	Las Cruces
Malone, French.....	Mesilla Park
Quesenberry, Elizabeth.....	Las Cruces
Redding, Edward.....	Mimbres
Redding, Vivian.....	Mimbres
Sancedo, Jose M.....	Las Cruces
Skidmore, Frank.....	Las Cruces
Trujillo, Candido J.....	Mesilla
Young, Donald W.....	Las Cruces

### C Class

Bloodgood, Clyde.....	Kingston
Burch, Calita.....	Las Cruces
Dessauer, Numa.....	Las Cruces
Duriez, Leo.....	Las Cruces
Durling, Nethie.....	East Las Vegas
Gamboa, Alfred.....	Mesilla
Guerra Jose C.....	Mesilla
Jurado, Gaspar.....	Jarilla
MacIver, Ivander.....	Mesilla Park
Malone, James.....	Mesilla Park
Mandell, Bertha E.....	Mesilla Park



Nabours, Florence.....	Mesilla Park
Poe, Archie E .....	Mesilla Park
Quesenberry, George.....	Las Cruces
Quiroz, Bonifacio.....	Chihuahua, Mexico
Romero, Carlos.....	Chihuahua, Mexico
Soto, Leonor .....	Las Cruces
Stewart, Rupert L.....	Mesilla Park
Waddell, Harry.....	Las Cruces
Waddell, Otto ..	Las Cruces
Wade, Wilson.....	Las Cruces

### Special Class

Alderete, Juan .....	Las Cruces
Berdugo, Juan.....	Mesilla
Chavez, Jesus C.....	Magdalena
Chavez, Manuel B. C.....	Magdalena
Geck, William J.....	Anthony
Loundabacio, Bonificio .....	Magdalena
McLean, Alexander... ..	Metcalf, Arizona
Nunn, James.....	Lake Valley
Ornelas, Aurelio.....	Chihuahua, Mexico
Sanchez, Demetrio.....	Red Canyon
Uranga, Benign .....	Mesilla

PROGRAM OF RECITATIONS

FIRST TERM: MORNING						
TIME	SENIOR PREPARATORY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	STENOGRAPHY
8:30	English (M. T. W. Th.)* Agriculture (F.)	English +	Spanish	Analytic Geometry Floriculture (M. W.)	Mineralogy	
9:25	General History (T. W. Th. F.) Sewing (M.)	Plane Geometry	Physics	Pomology Elementary Mechanics (M. T. W. Th.)	Mineralogy	Stenography
10:20	Cooking (T. Th.) Freehand Drawing (M. W.) Floriculture (F.)	Live Stock (M. W.) Greenhouse Handicraft (Th.) Latin	Physics (Th.) Trigonometry (M. T. W. F.)	Canning and Preserving (M. W. F.) Floriculture (T.) English (Th.) Entomology (M. W.) Meteorology (T. F.)	English (M. W.) Dairying (T. Th.)	Advanced Stenography
11:15	Cooking (T. Th.) Floriculture (M. W. F.) Military Drill (M. T. W. F.)	Greenhouse Handicraft (Th.) Military Drill (M. T. W. F.)	Trigonometry (Th.) Military Drill (M. T. W. F.)	Canning and Preserving (M. W. F.) Floriculture (T.) Military Drill (M. T. W. F.)	Steam Engine Dairying	Military Drill (M. T. W. F.)

\*M. T. W. Th. F.—Monday, Tuesday, Wednesday, Thursday and Friday.

†Subjects without letters after them recite daily.

## PROGRAM OF RECITATIONS

FIRST TERM: AFTERNOON						
TIME	SENIOR PREPARATORY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	STENOGRAPHY
1:15	Algebra	Spanish	Pattern Making	Chemistry	Psychology Engineering Structures	Special Work
2:10	Carpentry (M. W. F.)	Biology Woodturning (M. W. F.) Mechanical Drawing (T. Th.)	Latin Pattern Making	Bench Work in Iron (M. W. F.) Machine Design (T. Th.)	Machine Shop (M. W.) Machine Design (T. Th.) Agricultural Chemistry (T. W. Th.) Rural Engineering (M.)	Stenography
3:05	Carpentry (M. W. F.) Agriculture (T. Th.) Sewing (M. W. F.)	Biology (M. W. F.) Woodturning (M. W. F.) Mechanical Drawing (T. Th.) Greenhouse Management (T. Th.)	English	Astronomy Bench Work in Iron (M. W. F.) Machine Design (T. Th.)	Machine Shop (M. W.) Machine Design (T. Th.) Rural Engineering (M. W. F.) Dietetics (M. W.) Dressmaking (T. Th.)	Commercial Spanish

PROGRAM OF RECITATIONS.

SECOND TERM: MORNING						
TIME	SENIOR PREPARATORY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	STENOGRAPHY
8:30	English (M. T. W. Th.) Horticulture (F.)	English	Spanish Descriptive Geometry	Calculus Cooking (T. W. Th. F.)	Geology	
9:25	General History (M. T. W. Th.) Horticulture (F.)	Plane Geom- etry	Physics	Cooking (T. W. Th. F.) Strength of Materials Pomology (F.)	English (T. Th.) Agricultural Chem- istry (M. W. F.)	Stenography
10:20	Cooking (T. Th.) Freehand Drawing (M. W.)	Spanish Live Stock (M. T. Th.) Greenhouse Management (W.)	Physics (Th.) Cooking (M. W. F.) Surveying (M.)	Political Economy (M. T. W. Th.) Pomology (F.) Astronomy (F.)	Hydraulics History of Civiliza- tion Agricultural Chem- istry (M. W. F.)	Advanced Steno- graphy
11:15	Cooking (T. Th.) Sewing (F.) Military Drill (M. T. W. F.)	Live Stock (Th.) Military Drill (M. T. W. F.)	Cooking (M. W. F.) Military Drill (M. T. W. F.)	English (Th.) Military Drill (M. T. W. F.)	Metallurgy (T. W. Th. F.)	Military Drill (M. T. W. F.)

## PROGRAM OF RECITATIONS.

SECOND TERM: AFTERNOON						
TIME	SENIOR PREPARATORY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	STENOGRAPHY
1:15	Algebra	Latin Greenhouse Handicraft (F.)	English Principles of Breeding (M. W. F.) Soils and Crops (T. Th.)	Chemistry		Stenography
2:10	Carpentry (M. W. F.) Horticulture (T. Th.)	Forging Biology (M. T. Th.) Greenhouse Handicraft (F.)	Surveying (T. W. Th.) Mechanical Drawing (M. F.) Topographical Drawing (F.) Sewing (M. T. W. F.)	Chemistry	Machine Shop (M. W. F.) Engine and Boiler Tests (T. Th.) Rural Economics (M. W. F.) Plant Breeding (T. Th.)	Commercial Spanish
3:05	Carpentry (M. W. F.) Sewing (M. W. F.)	Forging Biology	Surveying (T. W. Th.) Mechanical Drawing (M. F.) Topographical Drawing (F.) Latin	Stock Feeding	Machine Shop (M. W. F.) Engine and Boiler Tests (T. Th.) Dressmaking (Th.) Home Sanitation (W. F.)	Spanish Steno- graphy



PROGRAM OF RECITATIONS

THIRD TERM: MORNING						
TIME	SENIOR PREPARATORY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	STENOGRAPHY
8:30	English (M. T. W. Th.) Hygiene (F.)	English	Spanish Forestry (M. W.)	Physiology	Electrical Engineering. Practical Agriculture.	
9:25	Live Stock (M. W. F.)	Solid Geometry	Physics Olericulture (T. Th.)	Steam Boilers Plant Physiology (M. T. W. Th.) Olericulture (T. Th.) Pomology (F.)	Chemistry of Foods (M. W. F.)	Stenography
10:20	Botany (M. T. W. F.) Cooking (Th.)	Spanish Horticulture (M. W. Th.) Live Stock (T. F.)	Physics (Th.) Higher Algebra (M. T. W. F.) Cooking (T.)	Mechanism (M. W. Th. F.) Plant Physiology (W.) Pomology (F.) Landscape Gardening (M. Th.) English (T.) Cooking (M. W. F.) Astronomy (Th.)	English (T. Th.) Agricultural Chemistry (M. W. F.)	Advanced Stenography
11:15	Cooking (Th.) Sewing (M. W.) Military Drill (M. T. W. F.)	Horticulture (Th.) Military Drill (M. T. W. F.)	Cooking (T.) Higher Algebra (Th.) Bacteriology (Th.) Military Drill (M. T. W. F.)	Cooking (M. W. F.) Military Drill (M. T. W. F.)	Analytical Mechanics. Agricultural Chemistry (M. W. F.)	Military Drill. (M. T. W. F.)

## PROGRAM OF RECITATIONS

THIRD TERM: AFTERNOON						
TIME	SENIOR PREPARATORY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	STENOGRAPHY
1:15	Algebra	Latin	English Soils and Crops (T. W. Th. F.) Olericulture (M.)	Chemistry (T. W. Th. F.) Olericulture (M.)	Geology	Stenography
2:10		Biology Carpentry (M. W. F.) Mechanical Drawing (T. Th.)	Soil Physics (T. W. Th. F.) Foundry (M. W. F.) Machine De- sign (T. Th.) Sewing (T. W. Th. F.) Olericulture (M.) Med. & Mod. History	Chemistry (T. W. Th. F.) Olericulture (M.)	Machine Design (T. Th.) Chafing Dish (F.)	Commercial Span- ish
3:05	Chemistry (M. T. W. Th.)	Biology (T. Th. F.) Carpentry (M. W. T.) Mechanical Drawing (T. Th.)	Soil Physics (T. W. Th. F.) Foundry (M. W. F.) Machine De- sign (T. Th.) Latin Bacteriology (M.)	Calculus	Machine Design (T. Th.) Chafing Dish (F.) Dressmaking (T. Th.)	Spanish Stenogra- phy Office Practice

















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